Influencing a curriculum: an analysis of the historical evolution of farming resources and their impact on the 5-14 Environmental Studies curriculum

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ABSTRACT

The last decade of the 20th Century has witnessed a resurgence of the debate concerning farming in particular, and rural-urban issues in general. This debate has been fuelled by the belief, held by many of those who live in the rural areas, that there is little understanding of the countryside by the majority of the population including politicians, most of whom live in towns and cities. The origins of this belief can be traced back to the end of the 18th century and the beginnings of the Industrial Revolution. Since that time, major cultural, social and economic differences between the 'town and the country' have been identified.

In light of the above, this thesis addresses the historical dimensions of farming in relation to the Scottish education system and the curriculum. Within the theoretical concerns of curriculum context and change, this work explores the role of culture and the selection of knowledge to provide an understanding of the current economic and social role of farming. It delineates the key Scottish agricultural organisations involved in curriculum developments and it examines the relative influence of these groups, particularly during periods of intense involvement by the State in curriculum change. The main methods employed to exert this influence are identified, specifically in relation to the provision of teaching resources.

It will be seen that at various occasions throughout this period leading players from the agricultural and landowning interests, either individually or as groups, recognised the importance of formal education systems for furthering their causes. Initially, it will be argued they attempted to use the education system to retain their positions of power and control in the existing rural hegemony. During the 20th century the power of the farmer and landowner diminished considerably due to social, political and economic reasons. Today, they seek to use the education system, and the curricula in particular, to help the urban population to gain an understanding of countryside matters and, thus, to influence both the political debate and the decision making process.

In this thesis it is argued that the present curriculum, Curriculum and Assessment in Scotland National Guidelines 5-14, is open to outside influences and the views of interest groups such as the farming lobby, on a new and unprecedented scale. By the application of questionnaires and interviews, this thesis demonstrates that certain groups with interests in rural matters have grasped the opportunities to influence the curriculum.

However, it is found that nationally the Scottish agricultural community has been unable to respond to the challenges presented to them by the 5-14 Guidelines, on a scale equal to that of other organisations with countryside interests.

Indeed, it is concluded that, while those from the countryside are demanding a greater understanding of the issues affecting them, and the curriculum provides opportunities for children to gain an understanding of farming and the management of the countryside, these opportunities are in danger of being lost by the persistent changes in educational policy and direction of the Scottish agricultural community.

DECLARATION

This thesis is the work of the author unless otherwise stated.

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DEDICATION

This work is dedicated to my supervisor, Dr Murray Black, who provided me with support, guidance and wise council for many years but who sadly died before the completion of this thesis.

ABBREVIATIONS

AA	Association of Agriculture
BEEF	Borders Environmental Education Forum
BSE	Bovine Spongiform Encephalopathy
CCC	Consultative Committee on the Curriculum
COPE	Committee on Primary Education
COSLA	Convention of Scottish Local Authorities
DES	Department of Education and Science
EIL	Education Industry Links
HASS	Highland and Agricultural Society of Scotland
HMI	Her Majesty's Inspector of Schools
INSET	In-Service Training
LEA	Local Education Authority
MLC	Meat and Livestock Commission
MMB	Milk Marketing Boards
NDC	National Dairy Council
NFUS	National Farmers' Union of Scotland
PEDP	Primary Education Development Project
RASE	Royal Agricultural Society of England
RDG	Research and Development Group
RHASS	Royal Highland and Agricultural Society of Scotland
RSPB	Royal Society for the Protection of Birds
SAA	Scottish Association of Agriculture
SAC	Scottish Agricultural College
SCCC	Scottish Consultative Council on the Curriculum
SCES	Scottish Committee for Environmental Studies in Primary Schools
SCOTVEC	Scottish Vocational Education Council
SCRE	Scottish Council for Research in Education
SEB	Scottish Examination Board
SED	Scotch Education Department/Scottish Education Department
SEEC	Scottish Environmental Education Council
SFACET	Scottish Farm and Countryside Educational Trust
SLF	Scottish Landowners' Federation
SNH	Scottish Natural Heritage
SOED	Scottish Office Education Department
SOEnvD	Scottish Office Environment Department
SSPCA	Scottish Society for the Prevention of Cruelty to Animals
SSPCK	Scottish Society for the Propagation of Christian Knowledge
SWCL	Scottish Wildlife and Countryside Link
TESS	Times Educational Supplement Scotland
UBI	Understanding British Industry

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Introduction

In February 2001 one of the world's worst outbreaks of Foot and Mouth Disease began on British farms. The farming and the countryside became the focus of public and media attention and the crisis even led to the postponement of the General Election. It also generated a great deal of debate over rural issues, with many claiming that these had been neglected by the present Labour Government.

However, this current debate had started several years earlier. In March 1998 over 250,000 people from all over Britain joined in a march and rally in Hyde Park, London, to protest at the perceived lack of support for and understanding of countryside interests.

There were many and varied reasons why so many people had joined the rally. The hunting fraternity were concerned about the Labour government's support for a ban on fox hunting; farmers wanted to bring government and public attention to the financial problems which were beginning to affect every sector (notably brought about by the world-wide ban on beef exports due to BSE[1] and the high value of sterling); and rural residents were concerned by the closure of village shops, new housing developments, lack of rural transport and high fuel costs. Or perhaps, as Raymond Williams, in The Country and the City (1973) described, they were members of

> 'a precarious but persistent rural-intellectual radicalism: genuinely and actively hostile to industrialism and capitalism; opposed to commercialism and to the exploitation of the environment; attached to country ways and feelings, the literature and the lore' (Williams 1973:36).

Whatever their reasons for attending, all felt that their traditional way of life was under threat and that nobody was listening to them.

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[1] BSE –Bovine Spongiform Encephalopathy, a disease found in cattle. Scientific evidence suggests that this could be passed on to humans in the form of new variant Creutzfelt Jakob Disease (nvCJD), through eating infected meat. More commonly known as 'Mad Cow Disease'.

Writing in the 1970s Williams had commented on what seemed to be an old order,

> 'a "traditional" society, that keeps appearing, reappearing, at bewilderingly, various dates in practice as an idea, to some extent based in experience, against which contemporary change can be measured. The structure of feeling within which this backward reference is to be understood is then not primarily a matter of historical explanation and analysis. What is really significant is this particular kind of reaction to the fact of change, and this has more real and more interesting social causes' (*ibid:*35).

The Hyde Park rally, in 1998, had been organised by the Countryside Alliance, a then recent amalgamation of the British Field Sports Society and the Countryside Movement. This latter organisation had been launched with a blaze of publicity in 1995 and the Chairman, Sir David Steel, in an article in The Scotsman, had declared that one of its objectives was to become a powerful voice for the countryside,

> 'heard by Westminster, Whitehall and Brussels, the media and the public... to build and to welcome an honest and informed relationship between those in our towns and cities and those who live in the country' (Steel D, The Scotsman, 12 December 1995).

This lack of understanding between those who live and work in urban and rural areas has been recognised by many others. For example in Learning For Life[2], a National Strategy for Environmental Education in Scotland (The Scottish Office, 1993), it was noted that the

> 'Movement of people from the countryside to towns has led to unfamiliarity with the natural resource base on which we all depend, and there is a need to restore this' (The Scottish Office, 1993:2).

In the same Scotsman article in 1995, Sir David Steel refers to research carried out on behalf of the Countryside Movement which had revealed

> 'an appalling scale of ignorance amongst school children on rural matters. One in five did not know that bacon came from pigs and one in ten believed that lions, tigers, elephants and kangaroos are native to Britain' (Steel, 1995).

Again, this factor had been recognised for many years. Indeed, some 25 years earlier, in 1972, Fairbrother had commented,

> 'As well as more understanding we most of us also need more education on country matters, for it is unrealistic to condemn city people because their dogs run wild in an ecstasy of green fields, or because they leave country gates open behind them like city swing-doors' (Fairbrother, 1972:97).

She went further to note that 'most of the countryside is (likewise) working farmland but if there is any general education about agriculture we hear little of it'(*ibid,*:98). As Steel explained one of the functions of the Countryside Movement was to 'contribute to the education on the countryside', but it would not be the first organisation associated with the rural environment that had seen the education system as a means of influencing public opinion. This use of the education system to influence public opinion is an important issue. Pubic opinion can be shaped by a number of forces; usually these are seen as being in the public domain, for example, the media (newspapers, TV, film, radio). But recently, attention has turned to the forces influencing resourced-based learning within schools and which contribute considerably to the curriculum and its development.

Indeed, in my previous work for the Scottish Farm and Countryside Educational Trust (SFACET) it was my remit to provide both educational opportunities (including resources) for teachers and pupils to learn about farming and to provide the public with information about this topic. I was only too aware that this work not only related to the basic farming activities but that it was part of a socio-political and economic discourse. Often the objects of this discourse were out of the hands of the farmers themselves and, in the main, the decisions were not made in the Scottish Office, Whitehall or even Brussels but on a world wide scale through trading agreements and the policies of multi-national countries. On a Scottish level, research carried out on behalf of the Scottish Office on public attitudes to environmental issues contributed to this discourse. While the results from the Scottish Office research indicated that the majority of those questioned were generally critical of

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[2] Learning for Life – a report of the Working Group on Environmental Education to the Secretary of State for Scotland

farming methods, they felt that the farmers were probably in the best position to look after the countryside (Wilkinson and Waterton,1991).

The above discussion has identified the issues that led the Countryside Movement 'to make a contribution to the education on the countryside'; primarily the gap that exists between public perception and knowledge of what the countryside should be and what is actually taking place at the present time. But they were not the first countryside organisation to recognise that the educational system and the curriculum in particular presented opportunities for exerting influence on the school population and gaining support for their views (and hence my own work with SFACET).

However, during the 1980s and 1990s significant reforms took place within the education system as a whole and in relation to curriculum development. The system itself was seen as the site of 'the new managerialism' through Devolved School Management (DSM). This gave the schools more power, but, at the same time, other controls such as systems of 'audits' (for example, 'school league tables'), efficiency, effectiveness, consumer choice and accountability, were introduced. These reflected the 'marketisation of Scottish education' (Hartley, 1999:267).

Further, the introduction of a form of national curriculum at this time, in Scotland the Curriculum and Assessment in Scotland National Guidelines 5-14, potentially reduced an individual school's ability to develop its own curriculum. The implementation of a new curriculum itself is often market-led, with an increasing reliance on resources produced, not only by commercial publishing companies but also by companies and organisations with specific interests and clearly defined educational goals.

Given this background, this thesis explores the role of the curriculum in the promotion of specific politically, socially or economically-led interests. It will focus on the methods used by the agricultural community to influence the school curriculum, from both an historical perspective and through an account of

contemporary curriculum developments. In particular, emphasis is given to the location of farming in the primary curriculum, the resources used for its delivery and the organisations or groups that are providing these resources.

It will be seen that the content and form of the curriculum, both past and present, have been the subject of interest and interference from influential bodies. These include those representing landowners and farmers, the State through the Scottish Office, advisory committees and other groups with a variety of specific interests. Indeed, it will be demonstrated that there are a number of levels and means by which these groups have attempted to influence the curriculum. These levels range from influencing government policies and decisions to the promotion of resources.

Through this exploration, this thesis also identifies the means by which certain knowledge becomes part of the curriculum and is transmitted from one generation of schoolchildren to the next. It addresses the issue of the selection of knowledge for the inclusion in a curriculum with a view to delineating the key historical, political and economic influences on this selection. It will be argued that farming is part of the selection of knowledge. However, notwithstanding that selection, there is an apparent lack of understanding of this subject by the majority of the population. Or perhaps it is this very selection of knowledge that is the cause of this lack of understanding. This presents an interesting dichotomy: on the one hand the availability of farming knowledge and on the other the paucity of public knowledge on the same subject.

There is evidence to suggest that farmers and landowners have a traditional interest in education which dates back to the 17th Century. Indeed, as a once powerful sector of the population, they used this position to influence the education system and the curriculum since the time when formal education became available to the general population. The first three chapters of this thesis will focus on this historical dimension and delineate the changing role of a once powerful group in society on Scottish education and the curriculum. For as Carr points out,

> 'Thus the final conclusion to emerge is that any debate about the present condition or future development of the curriculum must be partially constituted by an understanding of the past' (Carr 1993:1).

This historical section covers the decline of power of the landowners and the church, through the rise of control of the state, national curriculum advisory bodies, local authority advisers and interest groups up to the introduction of the Curriculum and Assessment in Scotland National Guidelines 5-14[3].

In Chapter One, through a detailed reading of historical and educational literature on farming and rural land use, the historical roots of the influence and power of landowners and farmers on the education system are identified. The attitudes of this group to education are outlined and a comparison is made of the differing attitudes of Scottish farmers and landowners with their counterparts in England. It is noted that many farmers and landowners saw the development of universally-available education as a threat to rural hegemony and were often opposed to this development. While they wanted a supply of good young workers, they did not necessarily want well educated workers.

Also, in this chapter it will be noted that the individual farmers and landowners join together to form a range of organisations mainly to promote the development of farming industry and the management of the countryside. As a whole they make up the 'farming community' referred to in this work. The organisations are not mutually exclusive; many farmers and landowners will be actively involved in some, if not all, of the organisations. These include representative organisations such as the National Farmers' Union of Scotland and the Scottish Landowners' Association; those designed to promote and develop agriculture and the countryside interests such as the Royal Highland and Agriculture Society of Scotland, the Meat, Milk and Wool marketing boards; those with educational remits such as the agricultural colleges and the Scottish Farm and Countryside Educational Trust and those involved with the management of the countryside such as the Farming and Wildlife Advisory Groups.

The principal farming organisations are identified and described and their changing powers, influence and roles relating to education are noted.

Again using historical source material, Chapters Two and Three trace the role of farming in the Scottish primary (and where appropriate, secondary) curriculum up to the introduction of the development of the 5-14 Guidelines. Chapter Two focuses upon the origins and location of farming in the curriculum 1765-1965, whilst Chapter Three details the period 1965-1990. In Chapter Three the rise in the power and control over the curriculum by other bodies including curriculum advisory committees, local authorities and interest groups is noted. In these chapters it is demonstrated that historically, it has been possible for certain groups in society, such as farmers and landowners, to maintain their influence over the education system, particularly the curriculum and, most recently, through the production of teaching resources. It is interesting, therefore, that whilst farming and landowning classes used to have direct influence on the curriculum, their authority and influence still remains – albeit in a different form.

With authority and influence becoming central themes of this historical analysis, Chapter Four outlines a theoretical discussion which focuses on the relationship between education and curriculum, power and control. In this chapter the ideological background relating to these relationships will be identified and discussed. This chapter includes other important factors such as the selection of knowledge, the forces and groups that influence this selection, the role played by the curriculum in the transmission of knowledge and the importance of culture.

In light of this discussion of the curriculum as an integral part of cultural transmission, Chapter 5 addresses the background to the 5-14 curriculum. It traces the developmental stages through to implementation and it identifies the underlying forces for curriculum change. It was noted in previous chapters that farming is generally located within Environmental Studies and particular emphasis is given to

[3] This is more commonly referred to as the '5-14 Curriculum' or even just '5-14'

this part of the curriculum. In this chapter the location of farming in the new Environmental Studies curriculum, at a national and local authority level, is revealed. It also contains evidence to suggest the influence of a number of national organisations on the delivery of the curriculum at a strategic level. These organisations include those whose main concerns relate to the conservation of the countryside for example, Scottish Natural Heritage and the Royal Society for the Protection of Birds.

From the theoretical discussion, it will be seen that the curriculum is a social construction and that as society changes those in positions of power have sought to gain influence through the curriculum. Farmers and landowners were once a powerful group in society, indeed they have a traditional interest in education. In addition, as noted elsewhere in the introduction, the rural way of life plays an important part in British culture. However, the main research question to emerge from the foregoing concerns the role the farming community may continue to play in curriculum content, reform and development in the late 20th Century.

In Chapters Four and Five the importance of resources in the delivery of the curriculum has been identified as an important issue. In order to provide answers to the research question, it was necessary to consider the research methods available, the concepts and philosophies behind the research methodology and to discuss and adopt the most appropriate methods for this work. Through the discussion contained in Chapter Six, it is considered that both a qualitative and quantitative approach would be appropriate, using questionnaires and interviews as the most suitable interview techniques. Teachers and organisations with educational remits associated with food, farming and the countryside were used as the target groups and sample surveys were undertaken using these groups. The research design is outlined and it consists of (i) questionnaires to teachers attending an agricultural event, the Royal Highland Show in 1994 and 1995, (ii) questionnaires sent to food, farming and countryside organisations in 1996 and (iii) in-depth interviews carried out in 1997 with a selection of teachers with an interest in farming. Chapters Seven and Eight

contain the results of the questionnaires and interviews and, in particular, these results indicate the methods considered by interest groups to be the most effective in influencing the use of their resources by the teachers in the delivery of a farming topic.

Through this research on the content of the initial 5-14 Curriculum, conducted over a period of four years during the late 1990s, it will be argued that during the 1980s and 1990s the curriculum being delivered in primary schools had become market-led. This was especially because of the reliance on resources produced by companies and organisations with specific interests. Indeed, the form of the new curriculum provides opportunities for outside agencies to influence schools on a scale previously unavailable to them.

It will be seen that farming is an integral part of this curriculum and that some farming and food-related organisations have played an important role in providing the resources required for its delivery. This being the case, the thesis addresses the recent changes that have taken place within these farming and food-related organisations and the effects that this has had on their educational work. It will examine the effects of these changes for the future of their educational work and specifically, work related to the Scottish primary curriculum. Indeed, it will be argued that due to the political and economic changes that have taken place throughout the 20th Century, the agricultural community in Scotland is now less able to 'contribute to the education on the countryside'.

It is, therefore, likely that the cry, often heard over a least one hundred years, that the urban population do not understand the countryside and the role that farmers and landowners play in its management, will be repeated many more times in the future.

Chapter One

The Scottish Education System: An historical understanding of the influence and attitudes of farmers and landowners from an historical context

Introduction

One may note that the issues concerning the present rural population (particularly in respect to education) may appear to be a recent development. In fact, they are not new and it will be seen that farmers and landowners have been concerned about the dominance of the urban populations since the Industrial Revolution. Prior to this, the landowners represented a powerful force throughout Britain. Winnifrith (1969) commented that,

> 'Up to say 1840 the agricultural interest – mainly the interest of the country landowners – was as paramount as the industrial interest is today. They exploited their power. Thanks to the Corn Laws[1]... corn was sold at 29/- a cwt in 1812 and at 17/6d even as late as 1855' (Winnifrith 1969:6-7).

It is considered that the decline in the power of the farmers and landowners started with the repeal of the Corn Laws after the Crimean War. This was due to government policies that were dominated to furthering industry and providing cheap food for the industrial workforce. Winnifrith maintains that as a result, farming was allowed to go into decline and decay during the second half of the 19th Century, and that this domination by the urban industrial areas created a 'tremendous physical and psychological' separation between town and country in the last 100-150 years (*ibid*:7).

Thus, it is recognised that farmers and landowners were once a powerful group in society. Through a detailed reading of historical source material this chapter provides an examination of their attitudes to and influence on the development of the Scottish education system. It also delineates the background to the evident decline of one

[1] Legislation used from the 18th Century to protect the prices landowners received for corn by imposing very high duties on imported foreign corn. Finally repealed in 1846.

group's influence, that of the landowning class, and the rise of other influential bodies. These, it will be seen, are encouraged by and encompassed within the remit of the State. It will become apparent that, historically, there have been power struggles between organisations involved with agriculture and public education. The pedagogical path transference of information has not been without problems.

This chapter will be in four parts. In part one the attitudes of farmers and landowners to education in general is addressed. Part two identifies the role of this group in the early development of Scottish schools; part three describes the attempts made by agricultural organisations to influence the education system and the curriculum and part four identifies the key role that agriculture and the countryside has played in educational and curriculum experiments.

The attitudes of farmers and landowners to education

As noted earlier landowners and farmers were, until the end of the 18th century, the dominant power in Britain. Astor and Murray (1932) considered that until this time,

> 'the political balance was heavily weighted by the landed interests, and legislation was still coloured by the studied interests of the agricultural community'(Astor and Murray, 1932:43).

They shared the views of Winnifrith (1969) who considered that it was the repeal of the Corn Laws which led to 'the beginning of an era of industrial supremacy and neglect of agriculture'(*ibid*).

Scottish farmers, in contrast to their English counterparts, were in the main in favour of the abolition of the Corn Laws and their representatives in Westminster gave it overwhelming support. According to Mackie (1964) the Scottish farmers were more progressive than their neighbours in the south. The idea of Free Trade had been a familiar one to them since the days of Adam Smith and, at a meeting held in 1842, Scottish farmers condemned the Corn Laws as contrary to religion and the principles of morality (Mackie J D 1964:334).

The threat to the power held by the landowners and farmers is reflected, at least in England, in their attitudes to education and their attempts to influence curriculum content, initially by lobbying and using their positions in Parliament. Again, it would appear that the attitude of Scottish farmers and landowners was somewhat different.

Traditionally, it would appear that landowners and farmers viewed education with a certain degree of suspicion. There were two main reasons for this. Firstly, whilst they wanted agricultural education or rather education that would produce good agricultural workers, they did not want their workers or the workers' children to be provided with an education that would encourage them to move away from the farms and into the cities. Secondly, the farmers argued for many years that the school curriculum was an urban based one, not necessarily suited to rural schools and country life.

Indeed, in England, it was acknowledged that there was a widespread complaint amongst farmers that,

> 'the present education system operates prejudicially to the interests of agriculture', children were kept in school when 'they might usefully be employed on the farm'(Fisher, 1972:63).

In the last quarter of the 19th century Parliamentary Bills and subsequent Acts relating to child labour and education[2] created a great deal of debate and opposition from farmers and landowners. Their opposition was due to several reasons. These were:

a) lack of relevance of education to country life;
b) education robbed them of a useful source of cheap labour;
c) education made them restless 'the more they know the less they do'(Agricultural Gazette 1884);
d) education encouraged migration into towns (Fisher, 1972:63).

[2] Agricultural Children Act 1873, Education Act 1870

This attitude can be exemplified by an article by the 'True-Bred Rustic' (The Farmer and Stockbreeder 1899) who felt that

> 'education had been the worst possible thing for a labourer and was the cause of all rural discontent. Another example is 'farmers preferred boys young and men ignorant, for an educated man was discontented, independent and more fond of reading newspapers than of work' (Stewart, 1994:135).

Those farmers who did agree that boys under thirteen should receive some sort of education nevertheless felt that this should only be enough to enable them to work as farm labourers. Their own children would not be attending such schools and, as it was noted by Fisher,

> 'It is impossible in this country to ignore the existence of social distinctions and the reluctance which many parents look on any system proposing they associate their children with those beneath them in their station'(Fisher, 1972:70).

Education was seen by many farmers as an example of outside interference in agricultural affairs. They questioned the right 'of urban theorists' to tell farmers what to do when it was well known that cities were characterised by 'vice, filth and immorality.' Stewart (1994) commented further that,

> 'the cultural meaning of all this is clear. Urban outsiders could not understand the dynamics of agriculture, not least the demand of arable and labour intensive areas of child labour. The "natural" leaders of rural society would, as they had in the past and given further opportunity, provide and administer what was educationally required' (Stewart, 1994:134).

His conclusions were that there was a perceived challenge to rural hegemony and education was a major part of this attack,

> 'A change was taking place in attitudes and circumstances, and in consequence a threat to the perceived established order' (Stewart, 1994:134).

This debate and opposition to education in rural areas continue for some years after the 1870s. In the early 20th Century Rider Haggard (1902), whilst carrying out his survey of rural England, observed that there were still many farmers 'grumbling' about education. They felt that often the content was seen as being unsuitable to

agricultural life. His findings also supported the view that education has made labourers discontent,

> ' The diffusion of newspapers, the system of Board school education, and the restless spirit of our age has changed him so that now-a–days it is his main ambition to escape from the soil where he was bred and try his fortune in the cities' (Rider Haggard, 1902:545).

He felt that the main reason for them leaving was that the 'system of education does not allow him to come in actual contact with that land until he is too old to learn to love it' (*ibid*:546). He concluded that,' the present system is a town system and tends to turn people to the towns' (*ibid:*550).

This opposition to education from landowners and farmers was not just occurring on Britain. A similar situation has been noted from the southern United States of America (Apple 1993:80). There, farmers were concerned about low prices and what they perceived as unfavourable laws, and they formed organisations such as the Farmers Alliance to provide a powerful group which attempted to influence government and stave off the changes. Amongst other things education was one of their concerns, particularly the 'kinds of knowledge taught (and not taught)' to their children (Mitchell 1987:46). They felt that it was 'miseducation' that was taking place and that this was being governed by 'the same plutocratic groups that dominated other areas of government' (*ibid*:124). In 1890 they opposed the content of text books which they saw as teaching 'exactly the ideological perspectives which the Alliance so strongly opposed the virtues both of industrialization and the industrial giants' (*ibid*:128-129).

The Scottish Experience

The attitudes of farmers and landowners referred to above came mainly, but not exclusively from the USA and England, especially the large and influential arable farmers of East Anglia. However, opinions in Scotland towards mass education were different and Smout (1986) noted that Scots attitudes were,

> 'significantly different from the untrusting and hostile attitudes still dominant among the rulers of England' (Smout, 1986:209).

This (English) attitude, he noted, dated back at least to 1724 in Mandeville's Fable of the Bees and is exemplified in 1807 by a speech in parliament by David Giddy when a parochial school system was proposed for England:

> 'However, spacious in theory the project might be of giving education to the labouring classes of the poor, it would be prejudicial to their morals and happiness; it would teach them to despise their lot in life, instead of making them good servants in agriculture and other laborious employments. Instead of teaching them subordination, it would render them fractious and refractory, as was evident in the manufacturing counties; it would enable them to read seditious pamphlets, vicious books, and publications against Christianity; it would render them insolent to their superiors; and in a few years the legislature would find it necessary to direct the strong arm of power against them'(*ibid*:209-210).

Smout (1986) maintained that the general attitude adopted to education in Scotland was 'articulated but not invented' by Adam Smith. He noted that, in a Wealth of Nations, Smith had written,

> '... the more they are instructed the less liable they are to delusions of enthusiasm and superstition, which among ignorant nations, frequently occasion the most dreadful disorders. An instructed and intelligent people, besides, are always more decent and orderly than an ignorant and stupid one. They feel themselves, each individually, more respectable and more likely to obtain the respect of their lawful superiors, and they are therefore more disposed to respect their superiors' (Smout, 1986:210).

This view was also supported by organisations established to promote education, for example, in a report of the Inverness Society for the Education of the Poor in the Highlands[3], they considered that

> 'knowledge is a form of discontent and restlessness only when it is a rare possession; for it impels men to separate themselves from ignorant associates, and not from necessary duties' (Education Society, 1826:33).

[3] From the Moral Statistics of the Highlands and Islands of Scotland compiled from returns received by the Inverness Society for the Education of the Poor in the Highlands, printed for the Education Society 1826.

However, education, Adam Smith thus implies, is a means of retaining control by those in position of power over the mass of population. As Smout stresses,

> 'neither Smith nor anyone else in Scotland believed in a thorough-going democratic equality of opportunity in education. The common people in Smith's scheme, "cannot in any civilised society, be so well instructed as people of some rank or fortune"' (Smout, 1986:210).

The role of landowners and farmers in the early development of Scottish schools

The history of education in Scotland was closely linked with the landowners and farmers of the country until at least the 1870s, either at an individual, local level or through the number of influential societies established to further education.

In the report of the Inverness Society for the Education of the Poor in the Highlands, published in 1826, three periods of educational improvements are noted:

1. Between introduction of Christendom (6th Century) and the Reformation (12th Century) when 'nothing known accurately of public instruction' except perhaps for a few monks from Iona'.
2. Reformation to first settlement of the parish schools – no striking improvement observed in education (in the north of Scotland), 'The flood of knowledge which the art of printing poured out in surrounding nations, found an impassible barrier in our mountains.'
3. The introduction of parish schools.

(Education Society 1826:10)

In Scotland the influence of landowners on the education of the population can be traced back to the Act of Privy Council in 1616 which commanded that in every parish a school should be established. This was ratified in 1633 and to it was added the provision that the local landowners (heritors) should be taxed to provide the necessary endowment. This was strengthened in 1646 when the landowners were forced to pay for the parish schools. While they were able to exert some influence on

the hiring of the schoolmaster, at this time it was the church who were most influential in the content of the education the children received. Religious instruction and good behaviour were paramount 'godliness and gud manners...took pride of place' (Smout, 1969:83). However, the establishment of the parochial schools was not universal, although in some areas, notably the Lothians, Fife, Tayside and the North East, by 1696 nearly every parish had a school. In other areas the establishment was much more patchy. Some landowners were more generous than others and helped by contributing to the salaries of more than one teacher. Other types of schools were also established by SSPCK[4](mainly in the Highlands), private adventure schools[5] and Free Church Schools (after the Disruption[6]). None were entirely free, parents had to make some contribution however small.

An example of the range of school types is shown in Table 1 below. These are the results of a survey carried out in the Highlands in 1826.

Table 1.1 Number and Type of Schools in the Highlands 1826

Parochial schools	171
SSPCK	134
Gaelic School Society of Edinburgh	77
Glasgow Society	48
Inverness Society	65
Total	495

(Source: Moral Statistics of the Highlands and Islands of Scotland: From the Inverness Society for the Education of the Poor in the Highlands. The Education Society Inverness 1826)

[4] SSPCK –Scottish Society for Propagating Christian Knowledge was established in Edinburgh in1704 under the protection of the Assembly of the Church of Scotland.
[5] Schools run by private individuals outwith the control of the church.
[6] The Disruption –1843 - 200 ministers walked out of the General Assembly to form the Free Church of Scotland. The old kirk could no longer exercise its control over education – civil power extended to charity and education.

In the towns and cities it was the burghs who provided the education but as Smout notes,

> 'Around 1690 the population of Scotland numbered about 1 million...eight or nine out of every ten Scotsmen dwelt on the land, and depended for their living on the productivity of its farms. They were overwhelmingly a rural people'(Smout, 1969:111).

The success of this system of education was praised by many Scots and observers from elsewhere. For example, he quotes Alexander Christison[7] writing in 1802,

> 'the extraordinary material and cultural progress of Scotland since 1750....was above all attributable to the standards of Scottish education – a system so remarkable in its scope, so liberal in its ideas and so universal in its application that it had become the most precious inheritance which his generation had to hand on to its successors'(Smout, 1969:421).

In many cases this reflected the importance held by many, including the landowners and farmers to education. An example from the parish of Forgue in Aberdeenshire is given below:

> 'The inhabitants of the southern part of the parish were too far from the school to attempt to send their children there. Since in 1846 around 348 children under fifteen years old lived in this district the problem was sufficiently serious to trouble the local heritors. They met to discuss the issue and agreed to gather subscriptions together to create a school and schoolmaster's house at Ythan Wells. ...The cost was low partly because farmers agreed to cart the necessary building material (itself provided free) from the nearby quarries at their own expense. The speed and ease with which the operation was carried out marked the concern of the local heritors for the education of children in a rather bleak area where the population was increasing as more land was taken into cultivation' (Wood, 1991:25).

By 1851 statistics reveal that Scotland was no longer an overwhelmingly rural people when only just over one quarter of employment was in agriculture. Table 1.2 records the decline to the late 20th century.

[7] Alexander Christison, an Edinburgh schoolmaster and author of 'The General Diffusion of Knowledge. One Great Cause of Prosperity of North Britain.

Table 1.2 – Scotland - Employment by sectors, 1851-1981
(figures expressed as a percentage of total employment numbers)

	Agriculture	Mining and Quarrying	Manufacturing	Construction	Intermediate	Service
1851	26.0	4.4	43.2	5.5	5.0	15.9
1871	23.6	5.6	40.9	6.6	6.5	16.8
1891	15.3	6.3	43.2	6.4	9.3	19.6
1911	11.4	8.7	43.9	6.0	10.3	19.8
1911	11.8	8.0	36.5	5.9	18.5	19.3
1931	10.1	6.0	30.3	4.2	25.4	24.0
1951	7.4	4.5	35.1	6.9	21.9	42.1
1961	5.8	3.9	32.5	7.9	23.7	26.2
1971a	4.1	1.7	32.2	8.2	21.0	32.8
1971	2.7	1.9	33.4	7.9	20.6	33.4
1981	2.3	1.9	25.4	7.5	19.8	43.1

(Source: Brown and Cook (eds), 1983 :42[8])

By 1991 the percentage of the working population employed in Agriculture, Forestry and Fishing had fallen to 1.4% with a total of 27,600 being employed in this sector. (Scottish Office Industry Department, 1994)

In the last quarter of the 19th Century the influence of the heritors was diminished with the Education (Scotland) Act of 1872 when education was made compulsory and, as Carter (1979) noted, the new system was

> ' highly centralised, with a strong urban and bourgeois bias, the new system had been devised with an eye to the increasing demand for skilled manpower in an urban, industrialised, capitalist society'(Carter, 1979:95).

The education system provided the rural peasant children with 'an escape hatch from super exploitation on the family farm' (*ibid*:94). Previously to this, he noted they had accepted their lowly position in the patriarchal system because they hoped to be

[8] A change was made in the way the statistics were compiled and hence two sets of figures for 1911

patriarchs themselves one day. It is interesting to note that in the mid 19th century it appears that rural education was better than in the towns and John Gordon, the first government inspector of schools in Scotland recorded in one of his reports that

> 'the period of attendance commonly terminates among the agricultural population at 13 to 14 years of age; in manufacturing and mining districts it is often cut short at 8 or 9,' although 'minute books of country schools constantly refer to pressures of harvest, weeding and parental poverty in keeping children away from schools' (Smout, 1986:214).

In some cases the agricultural activities were accommodated by schools and their legacy remains today in the names and timing of school holidays.

In 1875 Alexander Mann of Rothiemay in Banffshire wrote, in his prize essay on Agricultural Education for the Highland and Agricultural Society of Scotland, about the exceptional quality of the Scottish Education system. Indeed, he considered that the greatly increased value of land in Scotland compared to Ireland and England was in the main due to:

> 'the vastly superior school system, which Scotland has possessed, and in intelligence and enterprise which it has been the means of developing among her agricultural classes' (Mann, 1875:126-127).

This echoes the views of Alexander Christison some seventy years earlier.

By the end of the 19th century the power base and thus the ability to influence education as a form of social control had changed, the Church and the landowners had been replaced by the state and industry. A position that has continued during the 20th century although the type of 'industry' may have changed. However, it was still possible to play an influential role as the records of the Duchess of Sutherland's attempts to establish a school in Sutherland at the beginning of the twentieth century demonstrated.

From her biography, it is noted that the Duchess

> 'was essentially a reformer, and that her strength lay in the promotion of practical schemes to aid groups of disadvantaged people to break out of the

> vicious circle of poverty and helplessness. In her view the working classes should be assisted to acquire the skills and education that would enable them to change society for themselves; and the first requisite for the Scottish crofter or the Potteries cripple was an economic independence'[10](Beaton, 1991:36).

The Duchess listened to the views of schoolmasters in Sutherland and investigated other rural technical schools in Germany, Austria and elsewhere and

> '...after talking it over with my husband ...and men of light and learning in education matters, I determined to make an effort to raise the money to build, equip and maintain an intermediary Technical School in Sutherland'[11] (*ibid* :37).

She considered that there was too much emphasis placed on the classics and that the present time 'was an age of science and technology but that this should not be divorced from a sound educational background' (*ibid*). She proposed that the school would provide,

> 'a practical and scientific training in agriculture and agricultural chemistry, in physics and in mathematics, in English humanistic studies, in artistic design and modeling and working in iron, wood and copper to boys aged thirteen to sixteen, a three year course to be arrived at' (*ibid* :41).

With her obvious determination, and a few influential friends including Andrew Carnegie, she achieved her ambition and the school was established. In 1947 the school acquired Drummuie Farm and, when it closed as an independent institution in 1968 to become the technical annex of Golspie High School, it was thought to be the only secondary school in Scotland with its own farm.

The influence of agricultural organisations on the education system

Landowners and farmers have historically come together to form associations and organisations which had strong links with education. Often these alliances were short

[10] *Ibid* quoted from D. Stuart, Dear Duchess, Millicent Duchess of Sutherland 1867-1955 (London 1982),95.
[11] *Ibid* quoted from Northern Times, 1 Dec.1904, report of Meeting of Board of Governors, STS, 29.11.1904.

lived, for a variety of reasons, a factor it will be demonstrated that was repeated in the 1990s. Today, there are three main organisations, the Royal Highland and Agricultural Society of Scotland (RHASS), the National Farmers' Union of Scotland (NFUS) and the Scottish Landowners' Federation (SLF). Each one has different aims and objectives and, while they may appear to represent different groups, in reality many individuals belong to two or all three organisations.

Historically, the most influential (and oldest) of these organisations at a national level is the RHASS (as it is now known), although many other groups were formed in local areas where they were influential in promoting the development of agriculture including education. Many of these local agricultural organisations and societies survive today, but more often than not their main activities relate to the organisation of annual agricultural shows.

The forerunners of Royal Highland and Agricultural Society of Scotland were founded to advance agriculture. The first, in 1723, was called "The Honourable the Society of Improvers in the Knowledge of Agriculture in Scotland" and it survived until 1745. Ten years later the Edinburgh Society for Encouraging Arts, Sciences, Manufactures and Agriculture was founded (members included Adam Smith and David Hume). Amongst the premiums offered were for 'drawings of fruit and vegetables by boys or girls under sixteen years' (Davidson, 1984:1). This society lasted for ten years, in its last year it only offered premiums for strong ale, beer and porter!

The Highland Society of Edinburgh was founded in 1784 with the general aim of improvements in the Highlands. The objects of the Society were:

1) to enquire into the state of the Highlands and Islands of Scotland, and the conditions of their inhabitants;
2) to investigate the means of improvement by establishing towns and villages, improving communications, advancing agriculture and fisheries, introducing

trades and industry, uniting landowners in this cause and encouraging the government to provide assistance;

3) to pay attention to the preservation of the language, poetry and music of the Highlands.

This organisation became in turn the Highland Society of Scotland at Edinburgh in 1787, when it received its first Royal Charter, the Highland and Agricultural Society of Scotland in 1834 and the Royal Highland and Agricultural Society of Scotland from 1948.

Initially, education was not mentioned directly in the objectives of the Society and it was not until 1856 that the Society changed its Royal Charter to incorporate the promotion of education for young agriculturalists. The Society had been involved with university education before this time through the support it gave to the setting up of both the Chair of Agriculture in Edinburgh University in 1790 and the Dick Veterinary College in 1840. Initially, the Society started to organise classes and lectures and eventually awarded diplomas, the first examinations for this took place in 1858 (*ibid*:17). They continued to award their diploma until 1900 after which a National Diploma in Agriculture was awarded jointly with the Royal Agricultural Society of England. With the development of the agricultural colleges, which the RHASS encouraged, new agricultural awards became available and the influential role of the RHASS in post-school education was diminished, although the Society still had representation on the Boards of these establishments and awarding bodies

During its history the Highland and Agricultural Society has also played a role in attempting to influence the curriculum in Scottish schools to the benefit of agriculture. In October 1844 a public meeting was held in Glasgow to discuss education and from this a Committee, the Agricultural Education Committee, was formed to promote the study of agriculture in elementary schools. It consisted mainly of members of the Highland Agricultural Society (Mason, 1935:90). At about the same time the parochial schoolmasters,

> 'resolved that it was expedient to introduce this branch of science into the Course of School education',
> and
> 'to seek assistance of the Agricultural Education Committee of the Highland Agricultural Society in furthering the project' (PP Accounts and Papers (12) Education, 1847 vol.xlv:409).

In 1874 members of the Society agreed that a petition should be sent to the Privy Council, as representing the Department of Science and Art, asking them to note that no schools existed in Scotland for the teaching of the sciences bearing upon agriculture. Also that they should give consideration to agriculture being included as a subject in primary schools. At the same meeting they agreed to offer a premium for the best agricultural textbook (HASS Transactions, 1875:14-22). The Society felt that it would be out of the question for them to operate on the primary schools themselves and the Department of Science and Art already had the organisation in place. The promoter of this resolution, Colonel Innes of Learney, had received a letter from a schoolmaster in Aberdeenshire, who was also chairman of the Association of Schoolmasters in three of the northern districts. It stated that 150 schoolmasters were ready to teach that 'branch of education'.

One of the purposes of the petition was to secure grants from the Department to enable the teaching to take place. Mann (1875) notes that the Scots has been falling behind in scientific knowledge and he bemoans the fact of how little grant is received by Scotland and what is received is

> 'paid for the teaching of physical geography and the elements of mathematics to young pupils in connection with day schools' (Mann, 1875:125).

At this time the Society still played an influential role in society and it consisted of 'upwards of four thousand of the principal proprietors, tenant-farmers, and scientific men of Scotland' (HASS Transactions, 1875). The members of its Council on Education, as laid out in its supplement to its main charter in 1856, exemplify this influence. They are shown in Table 1.3.

Table 1.3 Members of the Highlands and Agricultural Society of Scotland Education Committee 1875

Members of Council named by Charter	
The President of the Highland and Agricultural Society – in 1875 HRH the Prince of Wales	
The Lord Justice General	The Professor of Botany
The Dean of Faculty	The Professor of Chemistry
The Professor of Agriculture	The Professor of Natural History
The Professor of Anatomy	
Members of Council nominated by Society (1875)	
The Duke of Buccleuch KG	John Wilson, Eglinton Mains
Sir William Gibson- Craig, Bart.	Thomas Mylne, Niddrie Mains
Sir A C R Gibson Maitland, Bart	James W Hunter of Thurston
George Hope of Borelands	

(Source: Transactions of the HASS, 1875 Appendix B:10)

Funding was not immediately made available to help with agricultural instruction and, although the Paget Committee (1886) recommended that grant aid should be provided for this purpose, progress was not made until the 'whisky money'[12] (about £750,000 a year) became available. At the turn of the century the agricultural colleges were founded and it was these colleges that were able to provide courses for schoolmasters. Again, the Highland and Agricultural Society were behind these developments. Further details of the role of the colleges in primary education are given in subsequent paragraphs.

[12] Money originally collected by the Government for purposes of compensating dispossessed publicans, and subsequently applied by Local Authorities for the promotion of technical education.(Symon 1959)

The significance of agricultural education from this time is shown by the fact that when the Scottish Board of Agriculture was established in 1912, the control of grants for agricultural education was passed to it from the Scottish Education Authorities.

This factor was highlighted in 1920 when the Highland and Agricultural Society called a conference to discuss both the training of teachers in agriculture and need for agricultural education. Different departments were still responsible for agricultural education. The Board of Agriculture for Scotland, under the Small Landholders Acts, was responsible for agricultural education generally; education authorities acting along with the Scottish Education Department were responsible for all instruction including agricultural instruction of persons under eighteen years of age.

At the time of this conference, just after the end of the First World War, the importance of home grown food was paramount and it was considered important that children should be taught how to grow food. However, by this time there was very little provision for teachers to teach agriculture.

It was concern about the Education Act 1918 which made provision for continuation classes that caused the Highland and Agricultural Society[13] to call this conference to discuss the implications of the above to rural and agricultural education. Quotations from this conference are used extensively in the following paragraphs as they illustrate that farmers and landowners held views on education that had changed remarkably little over at least fifty years.

The Chairman in his opening remarks complained that:

> 'When the Act was a Bill there was a great deal of opposition to it from the Agricultural Community because of the apparent interference it was to have with the work of the farm...the taking away of labour from the farm must be done with as little interference as possible' (HASS, 1920:3).

He further commented that

[13] From Minutes of Conference, Highland and Agricultural Society of Scotland 1920

> 'none of the problems which awaited solution were more difficult to solve than those connected with the education of rural districts. There would be very little difficulty, he imagined, in densely populated urban areas, but when one came to deal with sparsely populated rural districts there would be difficult problems to solve, which would require skill and tact in dealing with the agricultural community' (*ibid*:3).

Other speakers at the conference were concerned about the fact that the agricultural community was being rated to pay for the cost involved in implementing the new Act to a far greater extent than any other industry had been called to pay, and,

> 'that constituted at least an equal claim by the agricultural industry to obtain the benefit of such education as they required'(*ibid*:3).

They also noted that,

> 'a tendency of education since the passing of the Act of 1872 had been in the direction of divorcing people from the soil. The education given to pupils and the training of the teacher were entirely on city lines'(*ibid*:4).

A Mr Ramsay commented

> ' If it were not for the young people coming into the cities from the country there would be very little fresh blood for the city populations, but they did not want to take away from the country its most vital asset, viz: those who were there to till the soil and do the best they could with the land in the way of food production and so on' (*ibid*:14).

He thought the rural teacher must come from the country also. He must be from a farmer or ploughman stock, with the love of agriculture engrained in him. The country should be his home and in his heart, and when he came to teach the young he should do so as a heart teacher and not a technically trained teacher from any College. Mr Ramsay considered that those with an existing cultural capital should be in charge of selecting those who were to teach thus,

> 'if the agricultural community was to get the finest teachers it would be wise for them to have an advisory council made up of farmers and ploughmen who would give their verdict on the men and women'(*ibid*:14).

Even at this time, in the 1920s, one of the participants expressed his views on education, views which echoed those expressed many times during the previous 50

years. A Mr Sleigh thought that agricultural education should begin before the stage of the Continuation classes[14],

> 'If they were to keep young people on the land and train them on the farm so that they might become efficient farm servants, agriculturalists must get in touch with them before the age of 12 at the latest and provide them with agricultural education in their young days, otherwise they would drift into subjects that were interesting to town people only'(*ibid*:9-10).

He concluded by suggesting that teaching of agriculture should take place in primary schools at an early an age as possible.

This idea gave rise to some debate about interesting pupils in activities going on around them, and some delegates expressed the opinion that in some schools the time between 11-14 was largely misspent. They asked if it would be possible to give rural schools the opportunity to experiment with education related to agriculture. Others thought that this was not acceptable and that pupils should get a 'good grounding in the three R's'. One participant thought that there was nothing more unfair than to introduce vocational training into the primary schools. It was unfair to tie pupils to the land without their having had the fullest opportunity of receiving a liberal education,

> 'After all we are all to be men and citizens first, and our occupation was a secondary matter'(*ibid*:20).

Another speaker thought that they could not bend a boy's mind before the age of 12.

> 'the teaching of history before the age of twelve would introduce a rural atmosphere. In fact if they made a boy a patriot they would give him a bent towards rural pursuits'(*ibid*:28).

The only woman recorded as speaking at the conference commented that in the primary schools children should be trained in observation - in noticing country things - rather than agricultural education but,

[14] Continuation classes – day or evening classes for pupils who had completed their education in the Advanced Division

> 'it was important that they should have, whether in a school garden or otherwise, a kind of rural interest which could be encouraged by each individual teacher' (*ibid*:29).

She also hoped that the girl's and women's side of this question would not be lost sight of,

> 'the drift into towns affected girls almost more than boys. If teachers in training were to have a certain knowledge of the country, she urged that women teachers should not be lost sight of' (*ibid*:30).

An HMI present sympathised with the views on rural education but he pointed out that many pupils in rural areas were not directly associated with agriculture, for example, sons of the manse and the grocer and their education up to 18 should,

> 'be of liberal and general nature...It should have a rural bias because it ought to have that everywhere. It is a misfortune for people in the cities, not to have it, but they should have it as far as possible'(*ibid*:26).

The influence that this conference had on agricultural education is not noted but there is no question that the RHASS and it predecessors played a very significant role, for at least 150 years in the promotion and development of agricultural education. This influence had been felt mostly in post–school and technical education. By 1993 the Society commissioned a report (Hall, 1993) to examine its role in agricultural education. The recommendations of the report were that it should stop awarding diplomas but should continue to award medals to students, that it should discuss its relationship with SCOTVEC[15] and that the National Farmers' Union of Scotland would be the more appropriate partner for SCOTVEC.

However, in the last half of the 20th century as this role has diminished, the RHASS turned its attention to the schools, both primary and secondary. This was primarily through the initiation in 1974 of the annual Schools Shield competition, an idea that reflects the Society's tradition of awarding premiums. The National Farmers' Union of Scotland were co-sponsors and it was designed

> 'to interest school children in the agricultural industry and to encourage them to become better informed about farming techniques and practices etc..'(Davidson, 1984:18-19).

This competition, initially quite popular with schools, continued in a variety of forms until 1998 as very few schools were taking part.

According to Davidson in the history of the RHASS, an Agricultural Resources Centre was opened at the Ingliston Showground in 1975 to

> 'provide facilities to familiarise school children and teachers with the back ground to Scottish farming'(*ibid*:19).

It is believed that this Centre was very short lived, if indeed, it ever fully functioned at all. By 1988, when the author became involved, all that remained was a set of about a dozen china farm animals!

Little else by way of public education, as opposed to agricultural education, was undertaken directly by the RHASS apart from encouraging school groups to visit the Royal Highland Show. This is what the Society became known for amongst teachers in the 1990s.

However, it had become involved with another organisation, the Association of Agriculture and the history of the RHASS records that another milestone was the appointment of a Scottish Officer of the Association of Agriculture in 1978. The responsibility for the Resource Centre, the Schools Shield Competition and for 'forging links between individual schools and farms'(*ibid*) was passed to this organisation and from then until 1998 it took over the majority of educational work in Scotland.

The Association of Agriculture had been founded in 1947 by a handful of prominent figures in the agricultural industry 'to maintain the public's support following the wartime "Ploughing Up" and "Dig For Victory" campaigns' (Lennox,1996:1).

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[15] SCOTVEC – Scottish Vocational Education Council

Initially, it was established to inform the British public, particularly from the towns and cities, about agriculture. This very general approach proved to be difficult to implement with any great success and those involved decided that they should target the formal education sector, particularly teachers and college lecturers. According to Lennox this change also coincided with new teaching approaches of issue-based learning using real life examples. To support this, the Association produced a number of farming case studies using locations throughout Britain and held teachers' seminars.

By the 1980s the Association had significant support from the agricultural industry which 'recognised the credibility of an independent organisation'. Additional financial support was provided and the Association was able to undertake a number of different activities including the publication of resource lists, booklets and leaflets.

An important date in the 1980s was 1989 which was designated as British Food and Farming Year, to celebrate centenaries of the Royal Agricultural Society of England (RASE) and the Ministry of Agriculture Food and Fisheries (MAFF). Many events were held throughout the country, schools were encouraged to visit farms, education packs were produced, a set of commemorative stamps were issued by the Post Office and there was an agricultural show in Hyde Park. Not only did these events raise the profile of the public to food and farming matters, it also raised awareness amongst the agricultural community of the lack of understanding of agriculture by the majority of the population. They also became aware of the possibilities available to influence future generations through the education system.

However, the independent approach, as undertaken by the Association of Agriculture, was no longer seen to be paramount, membership organisations were being asked by their members what they were doing to educate the public. Providing funds for an organisation that was 'largely unknown and unacknowledged by the very industry it served'(*ibid*) was no longer enough. This factor, together with the increased public interest in modern farming methods persuaded the majority of the

Association's funders that they would have to undertake their own educational and public relations work. At the end of 1990 the Association of Agriculture closed. A replacement, the Food and Farming Information Service survived for just two years.

The agricultural industry did not seem aware of the recognition that the Association had gained in the educational world. They did, however, recognise that there was a need for an initial point of contact for educational enquiries and the RASE, after discussion and with the support of other industry organisations, re-established the Food and Farming Information Service at the National Agricultural Centre in 1994. However,

> 'It was agreed that whilst each sector would, if necessary, continue to develop their own individual activities in the field of education, (the) renewed Information Service would have an important role to perform in promoting these new initiatives and coordinating the dissemination of educational material' (*ibid*).

The work continues today although under a new name, the Food and Farming Education Service. The independence of the old Association of Agriculture has been lost, the various parts of the industry are now in control.

The developments in Scotland took a different pathway. In 1978 the Association of Agriculture established a Scottish office based at the Royal Highland Showground in Edinburgh. A management committee was formed and consisted of representatives of the RHASS, NFUS, SLF, Countryside Commission for Scotland, Scottish Milk Marketing Board and Highlands and Islands Development Board.

Initially, the Association in Scotland continued to run the Schools Shield competition, organise school farm links and distribute material produced by the main organisation in London. Although supported by the main agricultural organisations these groups also continued to provide their own educational activities. The NFUS were already recognised by those in the teaching profession as the first point of call for school farm visits (in reality many of the requests were passed on to the SAA). By the mid-1980s the NFUS became frustrated at the lack of information available to

schools about Scottish agriculture and, with the support of many of the land based organisations, they launched a new initiative, under the title of 'Farming in Scotland a Story Worth Knowing.' A full colour booklet was produced which, although not its primary intention, soon became established as a standard text in many schools. In the database of resources produced by the PEDP[16] it is described as follows,

> 'without doubt it is the most important and ambitious project to be undertaken on farming by a private body' (PEDP,1988:25-26).

This document also refers to the NFUS's future plans which include a project book for teachers; learning packs on Livestock in Scotland, Crops in Scotland, Modern Farming Methods and Technology, Farming and your Food, Conservation and the Countryside, slide presentations, video tapes, computer software. However, this project was not taken any further because two events took priority.

Firstly, the Glasgow Garden Festival in 1988 and, secondly, British Food and Farming Year, a year later. At the Glasgow Garden Festival the farming industry provided a farm building containing animals and demonstrations of farming activities. Although designed primarily as a public relations exercise, like British Food and Farming Year in England, it provided the agricultural community in Scotland with an insight into the lack of public understanding of rural activities. Following on so closely from this, the activities of British Food and Farming Year came too soon for them to participate in a way that others did in England. Under the direction of the Association of Agriculture (Scottish office), a series of education packs were produced and distributed free of charge to every school in Scotland. Ambitious plans to provide the opportunity for every child in Scotland to visit a farm were undertaken but with only limited success. Whilst in both of these initiatives most sectors of the agricultural industry took part, the main support came from the NFUS and their members.

[16] Primary Education Development Project

At the end of the year the Association of Agriculture took over completely the production of the education packs. The recurrent feature of the Association's activities was the lack of funding and these education packs were no exception, in fact, it took about five years to complete the series and some topics were never covered.

It was about this time that the decision was taken for the Association of Agriculture in Scotland to become a separate organisation and, in 1990, it became the Scottish Association of Agriculture (SAA). All the control was now within Scotland and the dominant organisations were the RHASS (providing the office accommodation) and the NFUS (providing the chairman). It subsequently changed its name again to the Scottish Farm and Countryside Educational Trust [17](SFACET). The work of continued to expand and Table 1.4 below shows this in the context of other organisations in England and Wales in 1998.

By the 1990s SFACET had become firmly established amongst the environmental education providers and was recognised as such in Learning for Life[18] (Scottish Office Environment Department 1993)

> 'An important role in preparing and distributing resources for environmental education has been taken up by the Scottish Association of Agriculture (SAA), an independent organisation providing a range of educational programmes about rural land use. It is also producing a Rural Database as an easily accessible source of information. SAA represents a wide range of bodies with rural sector interests and is well placed, as a recognised lead agricultural organisation, to provide education in and for this sector' (Scottish Office, 1993:24).

[17] To avoid confusion, the organisation is referred to as SFACET in future paragraphs, except in quotations

[18] Learning For Life A National Strategy for Environmental Education – A report of the Working Group on Environmental Education to the Secretary of State for Scotland.

Table 1.4 A comparison of activities undertaken by SFACET and organisations in England and Wales

Activity	Co-ordinating Organisation England and Wales	Co-ordinating Organisation Scotland
Farm Links	Groundwork Trust/ MAFF	SFACET
Farm Links	NFU Agricultural Societies MAFF	SFACET
Information Services	Food and Farming Education Service	SFACET
Food and Farming Challenge	Agricultural Societies Training and Enterprise companies	SFACET
Farm Open Days	NFU	SFACET
Educational activities at main agricultural shows	Agricultural Societies FFES	SFACET
Resource Material*	NFU National Dairy Council British Agrochemical Association Meat and Livestock Commission Countryside Foundation for Education Women's Farming Union	SFACET

*The organisations listed in England and Wales produce resource materials aimed mainly at the National Curriculum but they are used by Scottish Schools.
(Source: SFACET Internal Report 1997)

Increasingly the work of the SFACET was gaining recognition amongst teachers, it was working with local authorities on educational initiatives including farm visits, the provision of resource boxes and new resource material and it had also produced material for the Scottish Consultative Council on the Curriculum (SCCC).

As mentioned earlier funding had always been a problem for SFACET and it predecessors. Attempt to help to solve this were made, including moving into NFUS premises (this was rejected as it was felt that the Trust would be seen as losing its

independence and objectivity). In 1998 the RHASS undertook a review of its activities and recognition was given to the importance of education and the influential role that it had once had. They wished to try to restore some of this influence, and when requested by SFACET, to look at ways in which they could help resolve its funding problems they reacted by taking over the organisation and renaming it. In February 1999 the Royal Highland Education Trust was established with almost total control of the organisation going to the RHASS. This Scottish situation thus mirrors the events that took place in England a few years earlier. The new organisation continues to the present day, co-ordinating school farm links scheme and producing resource material.

Other agricultural organisations with educational activities had also been lost during the 1990s due in the main to the policies of the then Conservative government to introduce an increase in the market forces within the agricultural sector. The main example is the Scottish Milk Marketing Board, which at one time had a full time education officer, produced a wide range of educational materials and organised school farm visits and competitions. This function ceased when the statutory Milk Boards were disbanded in the early 1990s. Educational activities for this sector continue through the National Dairy Council based in London. Those that remain also cover the UK including the Meat and Livestock Commission and the British Agrochemical Association. This exemplifies the power (and finance) that different sectors and organisations have. Rather than working together, the industry is divided into interest groups each vying for position and recognition in the educational field.

The agricultural colleges were briefly mentioned earlier as taking over responsibilities for post-school education from the RHASS. They also played an important role, particularly when they were first established, by providing training courses for teachers and also, through local advisers, individual help and advice to schools in the development of school gardens. This latter role appears to have diminished from about the 1920s.

The main agricultural college, Scottish Agricultural College (SAC), founded with the amalgamation of the East of Scotland, West of Scotland and North of Scotland Colleges of Agriculture, recognised the value (for potential future students) of providing facilities for schools and established different facilities at each of their locations. In Edinburgh the East of Scotland College had already had long established connections with the local education authority and, through the use of a government training scheme in the 1980s, had produced resource boxes for Lothian schools and provided access for school groups to its farms. In the 1990s it continued this work through the establishment of a Countryside Centre with a series of activities designed for the Scottish curriculum. Whilst initially the work focussed on agriculture, this has changed over time to look more at land management and conservation. The later topic is also the focus of the countryside centre established in the west. Each of the centres is able to provide for schools locally rather than nationally.

At a local level, Scotland had four regional agricultural colleges, the Barony in Dumfries, Elmwood in Fife, Oatridge in West Lothian and Clinterty in Aberdeenshire. All of these were under local authority financing until the 1990s and as such were able to develop close links with local schools and provide them with access to farms and resources. Schools liaison staff were appointed and many thousands of children were able to visit the farms and countryside. The change in the financing of these colleges from the local authorities to central government changed this and the links with the local authority were cut. Most of them retain some links with local schools but the means of financing visits and staff time has become more difficult and has resulted in some cutbacks in these activities as they focus on the core activities of teaching students.

Key role played by agriculture and the countryside in early educational and curriculum experiments

The organisations referred to in the previous paragraphs have mainly been more concerned with improving and promoting agriculture and with the rural population,

particularly those who worked for them, than the countryside as a whole. It was noted that,

> 'Nature has little meaning to most of them (townspeople), and no charms; but they love a gas lamp. Nature, in my experience, only appeals to the truly educated. Our boasted system of education seems to make it detestable – a thing to flee from'(Rider Haggard 1902:542).

However, it is worth noting at this stage that many of educational pioneers, including John Dewey, AS Neill and Patrick Geddes, used the rural environment as a focus for their social and educational experiments.

An early example of this use of agriculture as a means of education is that of David Dale and, more notably Robert Owen, in their village at New Lanark. When the factory was first built, David Dale provided

> 'accommodation for 500 children whom he fed, clothed and educated, but the children were compelled to work in the factory from 6am-7pm, at which latter hour their education began'(Mason 1936:82).

When his son-in law, Robert Owen took over he abolished this system and encouraged large families to settle in the village. He built a school in the village in 1816 and the children were taught

> 'natural history, geography, ancient and modern history, singing and dancing, besides the subjects of reading and writing'(*ibid).*

His educational philosophy was inspired by Pestalozzi and Fellenberg after visiting their schools. According to Mason,

> 'Fellenberg's practice lay in the theory that education must prepare the individual for a useful, happy, moral life. He believed that this ideal could be attained only through the agency of practical training in the manual arts, particularly agriculture, although he recognised that the subsidiary arts had a subsidiary value'(*ibid*:85).

Mason concludes that this view of educational aim and method was an extension of Rousseau's principles, developed by Pestalozzi, and it exercised a powerful influence upon the educational system of many countries.

From 1819 onwards Owen used agriculture and manufactures as direct educational agencies. Children would be trained in gardening and the adults in agriculture as well as manufactures. Mason believed that the system adopted by Owen,

> 'His system, idealistic for the period, exerted more than a local influence upon social life. It constituted a factor in the progress of practical education in Scotland, which can scarcely be ignored' (*ibid*:86).

Nearly a hundred years later, John Dewey, one of the main influences in education from the beginning of the 20th century, refers to gardening in the curriculum,

> 'It affords an avenue of approach to knowledge of the place of farming and horticulture have had in the history of the race and which they occupy in present social organisation' (Dewey, 1920:235).

In his philosophy of education Dewey frequently refers to the use of the environment in the process of gaining knowledge and understanding. In addition to his child-centred approach, he introduced the concept of the project method of teaching although this apparently was not a new concept. The Hadow Report[19] referred to the fact that William Cobbett used this method to educate his own children. He started by getting them interested in activities on his farm and when they could progress no further due to lack of knowledge they consulted books,

> 'calculations about the farming affairs forced arithmetic upon us; the use, the necessity of the thing led us to the study'(Curtis, 1958 :168).

One of Dewey's many concerns was that nature study was being included in geography, 'Nature and the earth should be equivalent terms, and so should earth study and nature study' (Dewey, 1920:250). His remedy was to make nature study a study of nature,

> 'not fragments made meaningless through complete removal from the situations in which they are produced and in which they operate'(*ibid*).

[19] Board of Education:Report of the Consultative Committee on The Education of the Adolescent HMSO 1926

It was about the same time that Dewey was developing his theories on education that A S Neil was a schoolmaster in the south west of Scotland. He was not happy with the Scottish education system which he saw as putting too much stress on practical success. In *A Dominie's Log* he notes that the parents support this practical bias, 'Bains are getting over muckle eddication noo-a-days' said one parent to Neill, 'What eddication does a laddie need to herd a kye' (Scotland, 1969:58). This contrasts to schools in Edinburgh at the same date, for example, where George Watson's Boys school sought

> 'to train men, capable of filling a place in the world and of leading an honorable life in any sphere which they are called to occupy' (*ibid*:9).

Nor was Neill happy with educational reforms attempted by the Scottish educationalists,

> 'half-formed ideas that a sub-inspector has borrowed from a bad translation of a distinguished foreigner's treatise on education, and handed on to a deferential dominie'(Scotland, 1969:50).

Neil advocated the keeping of animals in school, 'one or two dogs, and a few cats for the girls'. He felt that a livestock school farm would be useful, not to help with the training of farm staff but, 'on humanitarian grounds: every child would acquire a sense of duty to animals' (Neill, 1915:102). On the subject of nature study, he did not agree that it should be specified as 'any good teacher will refer to Nature every five minutes of the day' (*ibid*).

When Neill began to publish his views on education which were basically child–centred, it appears that he was unaware of others such as Dewey and Montessori. He was criticised by many and,

> 'given a reading list to study – Rousseau, Pestalozzi, Froebel, Montessori and Dewey...and was advised to visit Mr Caldwell at the Perse School in Cambridge'(Hemmings, 1972:22).

Eventually, Neill left Scotland to found his school, Summerhill in England. He found that the Scottish system was not capable of adapting to his experimental methods.

In 1899 Dewey had attended a lecture in Chicago and declared that it was 'the greatest, most idea-provoking he had ever heard' (Mairet, 1957:100). The lecturer was a Scot, Sir Patrick Geddes. He is given credit for being the first to connect the quality of the environment with the method and content of education and, as such, has been described as one of the fathers of environmental education.

Geddes, in addition to his vision of an education system based on one's own surroundings, was also concerned about the lack of education in agriculture and forestry, particularly in the Universities. He felt that there was too much emphasis being given to the technical subjects and that subjects such as forestry, fishing, agriculture and mining, although important were being neglected. He was thus a great supporter of 'the forgotten men of the woods and fields' (*ibid* :62). Geddes had been brought up to enjoy the freedom and beauty of the countryside and he considered that 'the most important experience was freedom: to ramble, experiment and investigate in the liberating atmosphere of the countryside'(*ibid*).

He had however lived in a certain degree of comfort in Perth and perhaps had not seen, as A S Neill had encountered as a young child, the hardships endured by the young people in the rural areas. Instead, Geddes was keen that urban children should gain first hand experience of the countryside and gain some of 'the qualities the "rustic child" could bring to the cities' (Mellor, 1990:23). He believed that the cultural interaction of city and countryside could lead to the elimination of poverty.

As noted above Sir Patrick Geddes is now considered to be one of the founding fathers of the Environmental Movement. Throughout the 20th century this movement has developed and increased its power base particularly from the 1970s onwards. Even as early as the first half of the 20th century Mason (1935) noted that

> 'there has been gradual awakening, through the agency of the nature study movement, to a better appreciation of the environment and of community interest. The emphasis, which has been laid on observation of actual

phenomena and upon experimentation, has affected changes in educational outlook and educational method'(Mason, 1935:viii-ix).

Conclusions

In this chapter it has been demonstrated that, through the parochial school system, landowners and to some extent farmers were able to control the education system in rural Scotland.

During the late 18th Century this power over education was lost as the State, the merchants and professional classes took control. The landowners and farmers then saw education as a threat to the rural hegemony. Initially, they were against an expansion of the education system as they saw a loss of their labour force and the increasing influence of the towns. They complained that the curriculum was urban-based and one not suited to the countryside.

While landowners and farmers are no longer able to control the general education system, it has been demonstrated that this group was able to influence the teaching of agriculture in schools and to promote agricultural education at a higher level. The RHASS is identified as the main organisation in this respect and the agricultural colleges also play key roles.

During the latter half of the 20th Century the agricultural community recognised that while they were no longer one of the dominant forces in society able to control education, the curriculum was still an area which they were able to have some influence. However, it would appear that the power struggles within this sector has led to a loss of this influence and a lack of continuity. In addition, the policies of the Conservative government to introduce market economics to both this sector and in further education, initially reduced the scope for educational activities for schools.

On the other hand, early educationalists recognised the value of the countryside for educational development although the realities of country living have often been neglected. It has also been possible to identify the roots of the environmental movement as being concerned with the countryside. In particular, it becomes interesting to locate the influence of these groups, including the landowners and farmers, on the knowledge taught in schools both at the beginning of the 20th Century and throughout the following 100 years.

Thus the following chapters will focus on the knowledge relating to farming and the countryside taught in schools and the location and origins of this particular subject in the curriculum.

Chapter Two

The Scottish Curriculum: the origin and location of farming from 1730-1965

Introduction

In Chapter One it was noted that landowners and farmers, acting as groups or individuals, once had considerable control over the development of the rural schools system in Scotland. Of equal importance to this work is the knowledge that was taught in these schools and the continuing presence of this knowledge in the curriculum. This chapter locates the origins and location of farming in the Scottish curriculum over a period of approximately 200 years up to 1965 when curriculum changes were introduced which were to have a significant impact on the education of primary children and which form the basis of more recent curriculum reforms.

The main focus of this chapter is an historical analysis of the development of the curriculum in Scottish schools. In particular, this relates to the primary curriculum but reference is also made to the secondary curriculum. This is a reflection of the Scottish education system, where until the 1920s most pupils spent time in only one school. Changes to the school system took place after this time. These included the development of secondary schools and the raising of the school leaving age. It also demonstrates the rise in the influence of the State, at both national and local level, accompanied by the gradual decline of the influence of agricultural organisations.

Research in the area of agricultural education was undertaken in the 1930s by John Mason, for his investigation into the social experiments in rural education (Mason 1935), and his work is quoted extensively in the following pages. His conclusions were that the history of rural education in Scotland has been marked by gradual developments towards a social ideal.

> ' The experiments which have been attempted in the Scottish rural school during a period of nearly two hundred years, from the 18th century until the present time (*1935*), have been inspired by the ideal of establishing a closer relationship between school and the community, and progress is characterised by a gradual increase in the effort towards the utilisation of the environment as a basis for education' (Mason, 1935:vii).

This movement has continued until the present time and will be discussed in further detail in the next chapter which deals with the time from 1965 to the development of the 5-14 Curriculum Guidelines at the end of the 1980s.

This chapter will therefore start with an account of the location of farming in the curriculum during the 18th and 19th Centuries. It will then delineate the curriculum changes during the first 65 years of the 20th century and identify the influences or influential groups which brought to bear these changes. This includes the curricula in Primary, Secondary and Advanced Divisions. The concluding section will draw attention to the fact that landowners and farmers used education as a form of social control and were often primarily concerned with a good supply of farm labour. However, agriculture as a subject was never very popular with the pupils or the teachers, other subjects were seen as more important and a knowledge of these was seen as a way of escaping rural life. Significantly, farming became part of another subject, Nature Knowledge, which ensured its continuing role in the curriculum.

Farming in the Scottish curriculum during the 18th and 19th Centuries

As noted in the previous chapter, during the 18th and 19th Centuries several types of schools existed in Scotland including the Parochial Schools, the SSPCK schools and adventure schools. Smout, commenting on these different types of schools, noted that there was a wide regional difference in the education the children received,

> 'the educational experience of the rural Lowlands was very different from that of the rural Highlands, and the experiences from towns was different from both' (Smout, 1969:424).

For the most part the parochial school system operated in the Lowlands, the SSPCK in the Highlands.

The curriculum followed by the parochial schools was, Mason noted, dependent on the interests of the heritors and the schoolmasters were constrained in the subjects they taught not just from their own lack of knowledge of certain subjects but also by the schemes that they were compelled to follow. In general, this meant that they followed a more traditional scheme of reading, writing and arithmetic, while a few also taught other subjects such as Latin and Greek, mathematics and bookkeeping.

While the parochial schools were following this more traditional curriculum, the schools operated by the SSPCK were able to follow different curricula and it was in these schools that subjects related to agriculture began to appear in the curriculum.

Mason records that in the 1730s the SSPCK carried out a survey of the conditions existing in the schools and rural communities where their schools had been established. This survey reveals the fact that

> 'social conditions could be improved only by training young to habits of industry, of application, and of resource, and that accomplishment of this ideal was dependent on relating education to the immediate environment' (Mason, 1935:3).

The SSPCK were formed by a Letter Patent granted by the Crown. In 1738 a Second Letter Patent was granted and this allowed them to build new schools to teach children 'in some of the most necessary and useful arts of life'. Four essential occupations were chosen as the focus of these new schools – husbandry, housewifery, trades and manufactures. Mason comments that

> 'agriculture in its various branches, homecrafts like spinning, weaving and knitting, occupations necessary for rural community life, were selected as relating school to the environment'(*ibid*).

Other experiments in rural education were also taking place in the middle of the 18th Century. For example, a school was established in the parish of Craig near Montrose in 1752, due to the local lairds and tenants,

> 'who with considerable foresight and enthusiasm, had formed themselves into a society for the purpose of supporting a school where agriculture and the art of gardening should form part of the curriculum' (*ibid*:10).

The main purpose of this school was to provide an education in both the traditional subjects and also agricultural related subjects and the proposed scheme of instruction embracing,

> 'the principles of Christianity and good Morals, the History of Great Britain, the art of Husbandry and Agriculture, with the Rules thereof put into practice in neighbouring farms; also the Art of Gardening, Geometry and Land Measuring' (*ibid*).

This experiment was very short lived as it appears that the support of the lairds and tenants was withdrawn only four years after its inception and the experiment had proved to be a failure, although the reason for this is not given.

At about the same period that the SSPCK were introducing elements of agriculture into their schools, the Board of Manufactures were establishing colonies,

> 'where community interests were concerned in the arts necessary to the life and progress of a circumscribed colony - the arts of agriculture, the cultivation of flax, the art of spinning and weaving, and the subsidiary, yet necessary crafts in leather, wood and metal' (*ibid*:64).

Therefore, it would appear that Highland lairds were in support of such developments.

Also at this time, the government through the Commissioners for Managing the Forfeited Estates, were establishing schools on these estates and introducing in them a scheme of practical education relating to agriculture (flax was a very important crop

for these communities) and manufactures. The forfeited lands were returned to the former owners in 1784 and the schools were often taken over by the SSPCK.

The conclusions that Mason gained from these experiments were that, in spite of their limitations,

> 'it may be said that the enterprise of the Board of Manufactures, of the SSPCK, and of the Forfeited Estate[1] Commissioners exerted an influence upon social conditions which gradually permeated the community'(*ibid*).

However, he records that there was opposition to the spread of these new ideas due to,

> ' The promoters of industry were dealing with people who prided themselves on their descent, who regarded all handicrafts as servile, who for generations had been accustomed to look upon the spinning of yarn as women's work, and who held tenaciously to custom and tradition in agricultural practice' (*ibid*:64).

Writing in 1935 before the advent of more modern industrial influences on education such as TVEI[2], Mason concludes that,

> 'The experiments in vocational education undertaken by the SSPCK and the Forfeited Estates Commissioners may appear of little consequence when viewed from the standpoint of modern educational aims and methods, but they were only on a parallel with the general state of educational development, at a time when aims were definitely circumscribed and methods of obtaining them necessarily narrow. It is to be remembered that the educational practice of the Scots schools during the period was limited in its application. The scholastic subjects taught by the school masters never reached even moderately high levels and the qualifications of the school

[1] Forfeited Estates were those of owners, mostly highland chiefs, who had fought on the side of Prince Charles Edward in the 1745 Rising and who under an Act of Parliament Forfeited their estates. The Commissioners were appointed in 1755 to survey and make plans of the estates and to 'see that the income derived from the estates was used solely for the "purposes of civilizing the inhabitants upon the said estates and other parts of the Highlands and Islands of Scotland, the promoting amongst them of the Protestant religion, good Government, Industry and Manufactures and the Principles of Duty and Loyalty to His Majesty (etc)". (From Scottish Forfeited Estate Papers, ed. A. H. Millar (Scot. Hist. Soc., 1909), quoted in The Early Maps of Scotland, Vol. 1, Third Ed. 1973 Royal Scottish Geographical Association p116)

[2] TVEI – Technical and Vocational Educational Initiative (commenced in the 1980s)

masters themselves were deficient enough to set a narrow limit on educational progress' (*ibid*:66-67).

During the period that has been discussed above the main influences on the curriculum had come from the Church, the SSPCK and the individual landowners. From about 1834 onwards the state gradually began to exert influence over education and the curriculum.

In 1834 grants were made available by the government to ensure that sufficient schools were available for all children in the parishes and burghs. In 1838 a questionnaire was sent to the schools on behalf of the Select Committee on the State of Education in Scotland and 'amongst other things it asked whether instruction was given in gardening, agriculture, or any mechanical operation' (*ibid*:88).

The Committee, when considering the introduction of industrial courses in elementary schools, recognised that 'the problems of the education of the rural child, male or female, was distinct from that of the urban dweller' (*ibid*:92). They proposed that there should be three types of schools for which grant aid would be available:

schools with field gardens

schools with workshops for teaching trades

and schools equipped with kitchens and wash-houses for the teaching of household management.

It was noted that,

> 'There were rural areas in which the labour of land could fulfil in high degree the essential conditions of a sufficient industrial training, afford healthy exercise, unlimited scope for collateral information, and for the development of resourcefulness in the child. Manual labour and the use of implements of horticulture and agriculture, including the tools of the mason and of the carpenter in executing minor repairs in and about the garden, were regarded as a means of making the workman "handy, resourceful and socially useful"' (*ibid*: 92-93).

This contrasts with the Committee's concept of urban schooling where 'skill and an intelligent outlook were highly desirable for the development of social life'(*ibid*).

There was some comment on this,

> 'the object of industrial (as part of ordinary) instruction should be the same as that of books viz. to fit the learner for doing the best in life, not to prescribe definitely his sphere in it'(*ibid*:95).

It would appear, however, that those schools which did introduce agriculture into their curriculum, taught the subject in the classroom with no or little practical work.

> 'What was attempted became theoretical instruction, consisting of lessons in the principles of agriculture, the object being that, by teaching improved methods of husbandry, rural industry might benefit' (*ibid*:99).

As with any new subject that is introduced into the curriculum its delivery is to a great extent governed by the knowledge and enthusiasm of the schoolmaster. To help with this, short courses of lectures were held in Edinburgh, Ayr and Dumfries and it is reported that more than 300 attended in Edinburgh (PP Accounts and papers(I2) Education, 1847 vol. xlv:409). By 1845 the Committee reported that agriculture had been introduced into 74 schools and that Ayrshire possessed a larger number than any other county in Scotland.

While there was obviously some enthusiasm for teaching this subject in certain areas Mason notes that the development of the movement at this time was impeded by the unwillingness of the schoolmasters to adopt the subject, by the lack of knowledge on the part of the teachers, and by the indifference of the general public (Mason, 1935:91).

The 1872 Education Act made it compulsory for education to be provided for children between the ages of 5-13 years and the control over the schools was transferred from the church and heritors to the school boards, which in rural areas, often consisted of farmers and landowners. Clause 65 of the Act stated that every

public school and every school subject to inspection shall be open to children of all denominations and any child may be withdrawn by his parents from any instruction in religious subjects and from any religious observance in any such school, and, as Mason noted, this marked the end of an era of over 300 years of control by the church (*ibid*:137).

At this stage the subject of secondary education was not given any priority and as Smout records 'the old burgh schools...taught their pupils little other than the three Rs' (Smout, 1969:221).

Another factor which is significant as to why some subjects were taught and not others is that payment still had to be made by parents for each subject taught. This is exemplified by Wood (1991) in his case study of Little Forgue School in Aberdeenshire. He notes that the teacher was expected to provide instruction in Reading, Writing, Arithmetic, Geography, scripture and History. However, the quarterly fees

> 'ranged from two shillings for Reading to three shillings when Arithmetic and Writing were added and five shillings when Arithmetic, Geography and Latin were also included. However, the local people were far from well off and prudently concentrated their child's attention on what they regarded as most important – reading and writing' (Wood, 1991:27).

Commenting on the reaction by both the parishioners and the schoolmaster to the changes that took place following the 1872 Act, Wood records,

> 'In 1872 the Education Act imposed upon Scotland's parishes the system of locally-elected School Boards that were to oversee an overhaul of the Country's schools. Enthusiasts for compulsory mass education welcomed this step as an essential preliminary to be able to insist that all children received education between the ages of five and twelve or thirteen. But those soon to be compelled to dispatch their offspring to receive a regular diet of reading writing and arithmetic were not necessarily equally delighted. In poorer parts of Scotland, like Forgue parish, the prospect of paying school fees, or of making humiliating pleas for help to the local Parochial Board were not welcomed, nor was the probable loss of child labour at busy times in the farming year....Thus the task of the rural teacher in these years was far from

> enviable. He himself was a member of the farming community and could see its needs and problems. Yet he was regularly visited by inspectors from Edinburgh who did not fully grasp the context in which he worked' (*ibid*).

The 1870s also saw the rise in the movement to increase the teaching of science. Mason considers that,

> 'the extension of the general science movement, the appreciation of its possibilities and the insight of rural educators at length centred interest upon agriculture as a subject of value to the individual and to the social group to which, by circumstances of environment and occupation, he rightly belonged' (Mason, 1935:102).

It appears that the attitudes of the schoolmasters to teaching agriculture had changed by 1875. Following the Highland and Agricultural Society's petition to the House of Lords Committee of Council on Education in Scotland, as mentioned in the previous chapter, agriculture became a subject eligible for grants under the Science and Art Department Grant,

> '... thus a scheme was set up for the dissemination of scientific knowledge concerning agriculture. Its purpose afforded a general application, valuable alike to the individual and to the rural community. The prominence of this purpose, its inherent latitude, and the possibilities involved in this attempt to influence rural society through interest in its life and its occupations, gave a significance to the new movement which has perhaps never been fully appreciated' (*ibid*:103).

Reports of the Science and Art Department in 1879 noted that thirteen schools in the north were teaching agriculture, none in the south.

> 'Moreover the traditional attitude of the Scots to the education of the schools acted as a brake upon progress and innovation. The hankering after academic knowledge, the relationship of the schools to the universities were powerful deterrents to the spread of scientific knowledge among the young' (*ibid:*106).

It is also noted that, in the northern areas at least,

> 'the innovation had little attraction for farming communities, who looked askance and regarded it with suspicion or with amused tolerance' (*ibid*:104).

Research by Mason revealed that the reports of the Committee of Council on Education in Scotland and dominies' log books indicate that agriculture featured little in the day school curriculum before the year 1883,

> 'Little can be deduced from the Statistical Accounts beyond the fact that the teaching of agriculture gradually spread throughout Scotland generally' (*ibid*:106).

In 1883 agriculture was included in the Fourth Schedule of the Code issued by the Scotch Education Department and by the next year they record that.133 pupils in northern rural schools were studying agriculture, 14 in west, 33 in south.

The relative popularity of this subject is demonstrated by Campbell who notes that,

> 'specific subjects in order of the number of pupils taking them in 1885 were English Literature, domestic economy, physical geography, Latin, animal physiology (more often than not related to the human body), French, mathematics, magnetism and electricity, chemistry, Greek, agriculture, botany, German, light and heat and mechanics' (Campbell, [no date]:3).

The method of 'payment by results' for the three elementary subjects was abolished in the Code of 1890 which at the same time modified the system of specific subjects to seven: mathematics, Latin, Greek, French, German, agriculture and domestic economy. This simplified the curriculum but,

> 'afforded the opportunity to managers of state-aided schools to adapt their scheme of work to local conditions by allowing them to select additional subjects at their discretion' (Knox, 1953:114).

The inclusion of agriculture in this specific list had a dramatic effect, as indicated in Table 2.1 given below for the number of pupils being taught the subject.

Table 2.1 Number of pupils being taught agriculture 1890-91

Year	Southern Division	Western Division	Northern Division	Total
1890	289	405	652	1346
1891	1245	1845	1807	4897

(Source: Campbell, [no date])

As with previous attempts to introduce agriculture into the curriculum the schoolmasters required some training in the subject and it is recorded that the Free Church Training College in Aberdeen was providing such courses in 1890,

> 'for students whose prospects lay in the direction of the rural school, where a knowledge of rural occupations and the principals underlying them could be utilised in giving zest to school life and in forging a link between the school and the community' (Mason, 1935:121).

The attitude to education of those involved with rural land use was discussed in the previous chapter, Mason adds to this by commenting that,

> 'the principle of arousing enlightened interest in agricultural affairs through the medium of the school was accepted by the ruling classes, and the view upheld that by some system of vocational guidance an increase in efficiency might accrue not only to rural pursuits but also to the future agriculturalist as an individual' (*ibid:*126).

The Annual Reports of the Scotch Education Department not only provide evidence for the spread of agricultural teaching they also note local attempts to improve teaching in this subject. For example, in 1892 the County Councils of Ross, Cromarty and Inverness gave grants to schools which obtained passes in agriculture as a specific subject. In 1892 one Southern County Council provided for the instruction of many teachers in the subject, paying their rail fares to and from classes (Ann Rep 1893-94) and, the County Councils in the Western Division were reported to be anxious also to extend the teaching of the subject. The method of teaching, however, still concentrated on learning in the classroom rather that the use of the school grounds or the local environment (Campbell, [no date]:15).

Again, this new found enthusiasm for teaching agriculture was relatively short lived and, by 1897, it is recorded that,

> 'the Northern Division, the first to commence the teaching of agriculture in village schools was the first to abandon it in favour of the traditional subjects' (*ibid*).

More and more teachers and inspectors considered that agriculture was an unsuitable subject for elementary education and the numbers of pupils being taught the subject continued to decline.

Campbell notes that other writers[3] have suggested that there were four interrelated factors which influenced the importance given to academic subjects:

> 1.long connection between Scotland and Northern Europe particularly France where classical subjects were traditional;
>
> 2. the Scottish temperament favours this kind of learning;
>
> 3. conviction of Church that it should be led by men of advanced academic learning – often from dominie to cleric;
>
> 4.universities concentrated on very academic classical education.
>
> (Campbell, [no date]:5)

In 1898 the administration of the Scottish share of the Science and Art Grant was transferred from South Kensington to the Scotch Education Department.

> 'In 1898 a further sum of £35,000 was made available for the encouragement of secondary and technical (including agricultural) education by the Local Taxation Account (Scotland) Act of that year...£2000 was devoted to agricultural education'(Knox, 1953:135).

There was also another movement which was beginning to have an influence, the 'environmental' movement, most notably supported by men such as Patrick Geddes and, in 1898 the Scotch Education Department,

> 'provided further stimulus to the systematic study of the environment and through a new system of inspection of schools in 1899, agriculture was relegated to the domain of Nature Knowledge' (CCE Gen Report, 1899 Northern Division:570).

This is a very significant factor for this research.

[3] From Wade NA., Post-primary Education in the Primary Schools of Scotland 1872-1936, University of London Press 1939 pp36-38

Knox records that this Code also was the first to attempt to co-ordinate any post-primary curriculum in the elementary schools, the specific subjects were superseded and the prescribed basic curriculum consisted of English, geography, history, arithmetic and drawing at a senior stage with additional subjects in language, mathematics and experimental science. However,

> 'At the junior stage greater liberty was likewise given to managers in the curriculum offered, only nature knowledge and drawing being made compulsory apart from the three elementary subjects'(Knox, 1953:115).

Thus, it would appear that agriculture had been used for over 170 years as the first step in the curriculum to link pupils in rural schools with their local environment, it was the forerunner of nature study, environmental studies and environmental education. This has meant that as a subject it has survived into the Scottish curriculum of the twentieth century. Further, through this inclusion in Nature Knowledge, it eventually found its way into every school curriculum, urban and rural.

The first 65 years of the 20th Century

At the beginning of the 20th Century the church and heritors had lost their influence over the schools and the curriculum and, the power of the state, through the Scotch Education Department, had increased. By 1905 the church had also lost its influence over the training of teachers when responsibility for the training colleges was transferred to the SED (Smout, 1986:220).

In the Code of 1900 the school boards were given increased responsibility for the organisation and the curriculum of the schools. However, this system of local control by elected school boards introduced in 1872 was replaced in 1918 by county education authorities, which in turn made over their powers to county councils and the town councils in the four cities in the Local Government Act of 1929. Smout considered that,

> 'The old boards had sometimes been penny-pinching and parish-minded but there was an immediacy of demographic participation about them that was sacrificed in all later arrangements' (*ibid*:226).

Control had been removed from the local level to the county and national level.

Other changes had also occurred that are relevant to the teaching and inclusion of agriculture in the curriculum. Amongst these include the changes to the education system and the development of secondary education, the rise in numbers of female teachers and the emphasis placed on school gardens.

Influence of the Scotch Education Department

Following the 1872 Education Act the central administration for education in Scotland became the responsibility of the Scotch Education Department, a separate civil service department run by a permanent secretary. While it appears to have gained independence from the English system, for many years it shared many of the top personnel and there were protests from Scotland as it was felt that it could only be expected to bring Scottish education in line with English.

The first two permanent secretaries, Henry Craik and John Struthers were seen as powerful forces in the development of the Scottish education system from the 1880s until the beginning of the 1920s. According to Scotland (1969)

> 'Craik was certainly one of two most influential men in Scottish education during the second half of the 19th century. (The other was Simon Laurie, first professor or Education in the University of Edinburgh, superintendent of the Church of Scotland schools and Visitor and Examiner for 50 years to the Dick Bequest.)'(Scotland, 1969:24).

During Craik's tenure the Scottish system changed by:

the removal of payment by results

free elementary education for children aged 3-15

measures which eventually resulted in higher class schools
the introduction of a Secondary system
encouraged instruction in art and science
introduction of regular inspection of higher class schools
first leaving certificate exam
training and certification for teachers (*ibid*).

Craik was succeeded by John Struthers (permanent secretary 1905-21) who emphasised the importance of manual training as an element in ordinary schooling (Scotland, 1969:26). Codes relating to the curriculum continued to be issued by the Department, schools were expected to submit their curriculum for approval and inspectors from the Department visited the schools to ensure that the curriculum subjects were being taught. The changes started by these two men were influential in shaping the education system far beyond their own time and Smout considers that Craik and Struthers bear much of the responsibility for the nature of Scottish education in the 20th Century (Smout, 1986:225).

Significantly for this research the changes in the content of the curriculum at different levels had meant that, as noted previously, agriculture was no longer taught in the primary schools as a subject in its own right but was incorporated in Nature Knowledge or nature study. Courses were available at the post-primary level and the place of agriculture in the curriculum of the different levels will be identified in the following paragraphs.

In general, further developments which affected the curriculum included the establishment of an Advisory Council on Education under Section 20 Act (Education (Scotland) Act 1918. The main work of this Council was accomplished in 1940s but the fact that it was made an advisory council meant that the Education Department did not have to act on their recommendations.

It was not until 1939 that education became the responsibility of the Secretary of State for Scotland and, in 1956, the first Consultative Council on Curriculum was established (Scotland, 1969:187). Again, this was an advisory council and its progress and influence will be demonstrated in further chapters. During this period reports were produced which related to the curriculum and these will be referred to later.

One remarkable feature of change that occurred and which is not mentioned in the list attributed to Craik is the rise in female schoolteachers.

> 'In 1851, 65% of teachers had been men, by 1911 70% were women. Women predominated because they were cheap to employ, willing and plentiful, and the school boards needed an immediately augmented supply of inexpensive labour' (Smout, 1986:220).

Initially, they were also less well trained and it is unlikely that many of them would have had the knowledge to teach agriculture unless they came from a rural background. Also the agricultural education mentioned in previous paragraphs relates to that of the boys. Different courses would be offered to girls and, if they were taught at all, they might be offered subjects such as domestic economy, dairying and poultry keeping. For example, the Board of Agriculture reported in 1913 that during the year special steps have been taken 'to ensure that crofters and cottars in congested regions are given the same opportunities afforded to the Board's schools in Glasgow and Aberdeen for the training of their daughter's in domestic economy'. They note (*with some pride*) that

> '39 girls have been trained at the Glasgow school and 39 at the Aberdeen school. These girls are now, with a few exceptions, in good situations and giving satisfaction to their employers' (Second Report of Board of Agriculture for Scotland 1913, pxxxii).

The education offered to them was a way of ensuring a good supply of domestic labour rather than improving the life chances of the girls. It was a form of social control by those in power over the working classes.

The school system operating by the 1930s[4] is shown in Table 2.2 below and it is used to explain the courses offered in agriculture at the different levels.

Table 2.2 The Scottish System 1931

	ADULT EDUCATION	UNIVERSITY Or CENTRAL INSTITUTION	
		Leaving Certificate	18
	DAY or EVENING CONTINUATION CLASSES	SECONDARY	
15	Day School Certificate (Higher)		
	ADVANCED DIVISION		
14	Day School Certificate (Lower)	SCHOOL	
12	Qualifying or Control Examination		
			12
	Senior Division	PRIMARY	
9			
	Junior Division		
7		SCHOOL	
	Infant Department		
5	NURSERY SCHOOL		5

(Source: Scottish Council for Research in Education, 1931:17)

[4] It was not until 1945 that the school system in Scotland was organised in primary, secondary and further education. During the years prior to this there had been a gradual change to develop secondary and post-primary education in the elementary school. It was also in 1945 that the school leaving age was raised to 15, until this time it had been 14.

The Primary Curriculum

Hunter (1972) noted that,

> 'In the twentieth century the development of the primary school curriculum has shown three clear trends: towards an expansion of the content of the curriculum; towards a revaluation of the subjects of which it is composed; towards an integration of the various subjects taught'(Hunter, 1972:85).

However, it appears that these trends were slow to appear and only gained momentum in the late 1950s and 1960s. During the first forty years little change occurred in the primary curriculum.

The theme of closer links between schools and industry, identified in earlier paragraphs by the work of the Board of Manufactures and others, has also been a recurrent one that has continued until the present day.

For example, in 1928 the Committee on Education in Scotland, under the Chairmanship of Lord Salvesen, issued their second report. Their remit was to enquire into and advise upon public system of education in Scotland in relation to the requirements of trade and industry and this was the subject of the second report. In relation to agriculture the committee advised that there should be teaching of Rural Science in the primary schools, and they suggest that some consideration should be given to the possibility of providing in provincial secondary schools a natural science course with an agricultural direction (Scottish Journal of Agriculture, 1928: 476).

Writing in 1944 Peddie notes that the primary school curriculum consists of reading, writing, English composition, arithmetic, geography, drawing, music, and physical exercise (Peddie,1944). Little change, in fact, from the curriculum offered to pupils at the turn of the century. He raises some concerns about the curriculum,

> 'Here it is felt at present that the subjects of the curriculum might well receive a thorough overhaul, though it would be unfair to say that either the books or the methods of teaching or the general intent of the primary course have been humdrum or uninspired' (Peddie,1944:49).

This was written with a view to the future of the education system once the Second World War had ended. On the future he writes that schools and industry must be much more closely linked together and that,

> 'the highly intellectual academic concept...has now gone and in its place has now arrived a profound conviction that every child must be given an education to which his talents are suited'(*ibid*).

The need for change in the primary curriculum identified by Peddie continued in the 1940s and the Advisory Council's report of 1946 on primary education records that

> 'we discard with little regret the narrow and obsolete view that reading, writing and arithmetic are the three fundamentals of education...If it is necessary...to talk about any subjects at all being more fundamental than another we would suggest tentatively, and as a basis for clearer thinking on the subject, that the three fundamental subjects are physical education, handwork and speech'(Hunter, 1972:86).

However, the same Advisory Council report listed the subjects of the Primary school curriculum as: physical education; handwork, arithmetic, art, spoken English, nature study; geography and history; reading and writing; singing; written composition, spelling and dictation; and later in the report, religion. The Schools (Scotland) Code 1956 laid on primary schools the duty of providing instruction in a similar list of subjects, with the exception of religion (*ibid*:85). For the rest of the time,

> 'it was the duty of the primary school staff to foster in the pupil such democratic and Christian virtues as fair-mindedness, honesty, truthfulness, self-control, love of beauty, industry, self-reliance, forethought, responsibility to the community, goodwill towards other people, personal hygiene and cleanliness, good speech and manners and consideration for man' (Scotland, 1969:199).

Indeed, according to Scotland the curriculum subjects changed only slowly prior to the 1960s and commented on the Memorandum of 1950 prepared by HMIs,

> 'Although educational thought and criticism have been extensively active in the last 50 years, the main structure of the primary curriculum has remained unchanged; indeed, despite the importance now rightly attached to physical

> education, music, art and handwork, the basic skills of reading, writing and arithmetic can never cease to be fundamental in the primary school' (Scotland, 1969:199).

During the 1940s and 1950s the delivery of the curriculum was still being undertaken mainly using the black board and Scotland notes that teaching aids other than the blackboard were slow to appear and often neglected when they did,

> 'experiments could not shake the firm belief of a Scottish teacher that there was an irreducible amount which he had to tell the children which they could not discover for themselves, and that the most convenient way of doing this was by standing at the blackboard in front of the whole class' (*ibid*:199-200).

However, there were signs from the late 1940s onwards that attitudes to teaching were changing particularly from the younger teachers and inspectors and their reports revealed that projects and assignment were becoming usual in many schools. For example, at Carradale primary school they carried out projects on herring fishing in1948, forestry in1949 and dairy farming in 1950 (SEDR, 1950:15).

The Code of 1962, Scotland records, was still prescribing subjects and demanding local schemes of work, but three years later the Memorandum on the Primary School in Scotland initiated many changes and heralded the beginning of a new era in education (Scotland,1969:201). The impact of this Memorandum is discussed in Chapter Three.

Advanced Division

From 1922 onwards the primary schools were divided into Infants (<7), Juniors (7-9), Seniors (9-12) and the Advanced Division (12+) for pupils who were not going on to secondary education. Knox records the Advanced Division curriculum

> 'as consisting of English, history, geography, science and mathematics. Science covered physics, chemistry and biology or rural science. It was suggested that any time remaining was to be devoted towards some occupation or vocation which might include gardening and agriculture'(Knox, 1953:210-211).

By 1925 it was recorded that developments in agricultural instruction in West Lothian could be classified in 3 stages:

1) Nature study - taught in infant, junior and advanced classes in both elementary and secondary schools and is of a general nature.

2) School gardening courses - concentration on the crops of the garden and on the natural botanical orders, and by the selection of schools which could provide suitable ground in which to lay down plots - tendency to commit to rigid system of crop rotation without dealing with the scientific principals on which growth depends.

3) laboratory work - experiments in physics, chemistry and agriculture - school garden scheme modified for applying principles and investigating problems which from time to time might arise. Rural science - this became a special course at a central school which possessed the necessary equipment and land (Evans Gordon, 1925:125).

He notes that

> 'one outstanding feature throughout the new development was the recognition of the necessity of closely dovetailing together all the subjects of practical instruction'(*ibid*).

The course was designated a two year course in rural science, including both laboratory experiments and practical work on school plots.

In his paper Evans Gordon reveals the continuing influence of the agricultural colleges in the post-primary stages and notes that the third stage referred to above came about as an outcome of a conference held in February 1924 by the Edinburgh and East of Scotland College of Agriculture. The results of the conference recommended the following curriculum for Advanced Divisions in rural schools:-

> English (including History and Geography), Mathematics (including Arithmetic and Mensuration), Art, Rural Science, Handicrafts (boys), Domestic Science (girls), Music and Physical Training.

It appears that this advanced course was undertaken with some success in 3 schools in West Lothian including Wynchburgh and South Queensferry in West Lothian. It provided for a three year course in Rural Science leading up to a new National Certificate.

Knox commented further that

> 'even as late as 1934 the Department reported that this course (as noted in 1922) still predominated, although there had been a gradual development of more technical, commercial, domestic and rural courses as well'(Knox, 1953:211).

These developments may have been influenced by the curriculum proposed by the Scottish Council for Research in Education (SCRE) in their report published in 1931 and commissioned by the government for pupils in the Advanced Division aged twelve to fifteen years. This was in anticipation of the raising of the school leaving age to 15 which, as noted earlier, was not fully implemented for another 14 years.

In the introduction to their proposals they give recognition to the fact that the curriculum was geared towards professional occupations and note that only 2.75% of males and 7.07% females were employed in these, while over 60% of males were classified as in industrial occupations, 11.5% in commercial occupations and 11% in agricultural occupations, and they comment that,

> 'The redirection of a large number of post-primary pupils into more practical courses would doubtless be to the advantage of the pupils and in the interests of national efficiency and economy' (SCRE, 1931:12).

They also recognised that,

> 'It is only of late that educationalists have come to regard the determination of the curriculum as one of the fundamental problems of education, and yet it is not until a decision has been reached as to what is to be taught that we can discuss intelligently the plan of the school building, the kind of equipment necessary, the form of organisation, the qualifications of the teacher, and the teaching methods to be employed. Still more weighty is the consideration that upon our findings regarding the curriculum depends much of our national efficiency and well being' (*ibid*:1).

In forming their opinions and suggestions regarding the proposed curriculum they refer to the work of John Dewey and are influenced by his work,

> 'the complete subordination of everything to an immediate interest which is unrelated to all other knowledge and experience leads not to freedom, but to intellectual anarchy and practical efficiency'(*ibid*:14).

They observe that,

> 'To present, however, the formal aspect of a subject alone, because it appeals to the teacher, was part of his training, and is "good for" the pupils, and to impose it upon those who are incapable of recognising its significance, is to sacrifice their happiness and well-being to a merely traditional conception of culture'(*ibid*).

SCRE defined the aim of the proposed curriculum to be,

> 'to direct and develop the main interests of the pupils - interests in physical well-being; in 'language as a means of social intercourse and as a reservoir of social culture; in the records of human achievement; in the world as the home of man, as a source of wonder and as ministering to his needs; in all forms of art; in human conduct; and in religious devotion' (*ibid*:15).

The method employed by SCRE to develop the new curriculum was through a number of subject panels consisting of experts in the appropriate subjects and 'those conversant with school conditions.' It will be shown in later chapters that this procedure of appointing expert panels to oversee curriculum developments is a feature of the Scottish education system that has been employed for all the major curriculum changes. The project method is discussed and they note that it,

> 'As a reaction from the workings of a rigid curriculum there is the project method, which abolishes the predetermined curriculum comprising independent subjects, and seeks to provide pupils with opportunities for the exercise of initiative by developing their schoolroom activities from their interests. Apparently more systematic is the attempt to determine the minimum essentials, to make the requirements of the community the criterion in the determination of what is to be taught. This solution of the problem, while of value in seeking to relieve the curriculum of much that is merely a heritage from the past, has its apparent simplicity of approach somewhat discounted by the fact that facility in many routine activities of adult life is easily gained without any preparatory training in school' (*ibid*:1-2).

With regard to their suggestions for rural education they note that the teaching of Rural Science in the Advanced Division will be less successful unless some elementary work is carried out in the primary school. They suggest,

> 'To this end the scheme of Nature Study should be revised when the Rural Science scheme is drawn up, so that there may be a co-ordinated system of instruction throughout the school. The teaching of Rural Science should be regarded as amplifying the existing knowledge of environment, that knowledge which has been systematically obtained by direct study of nature throughout the school years'(*ibid*:283-4).

Significantly they urge that,

> 'the educational as opposed to the vocational aspect should never be ignored. To this end it seems advisable to shun such terms as "Agriculture"' (*ibid*:284).

The report encourages the use of school gardens and practical study of the environment through observation and experiment.

> 'Rural science from this aspect will then be the science of everyday experience, the science which will awaken interest not only in the rural environment - natural and social - but also what underlies advancement in both natural and social life elsewhere'(*ibid*:285).

The report also noted that arboriculture ought to have a place in the curriculum,

> 'The greater the part played by silviculture as a local industry the larger should be its place in the school curriculum of the district' (*ibid:*287-8).

They suggest that the Forestry Commission[5] and landowners should be asked for help in facilitating the delivery of this subject. The Colleges of Agriculture could also play their part in delivering other parts of the rural science curriculum.

[5] The Forestry Commission had been established in 1919.

Secondary Curriculum

Although agriculture had been placed within the realms of nature knowledge in the primary curriculum, it remained in the secondary curriculum of Scotland in one form or another until the early 1990s.[6] However, statistics reveal that the subject has never attracted a great number of pupils and that the number of schools teaching the subject had declined by the 1950s.

At the turn of the century Supplementary Courses, often held in the evenings, were offered to pupils who had passed their qualifying examination in the elementary school and by 1903 courses in rural management were available. In Schedule V and VI of the 1903 Code the course for rural schools includes nature study, geometry, study of newspaper reports, the keeping of accounts, woodwork and ironwork (optional) (Campbell,[no date]:61). In the Annual Report of the SED in that year it is recorded that

> 'The outstanding feature of the supplementary courses was their practical and vocational emphasis. For the first time a thorough attempt was made to train post-primary elementary pupils in subjects which would be directly useful to them in work and in the everyday affairs of civilised life, while at the same time continuing their general education' (*ibid*:39-40).

By 1908 schools offering Higher Classes had become known as secondary schools offering five or six year courses. (Education (Scotland) Act 1908)

An article in The Scottish Journal of Agriculture (1919) exemplifies one attempt at rural education 'at a time when the importance of developing and maintaining interests in country life and in agriculture is recognised on every hand...'

> 'The human material given to the teacher to work with consisted of evening and day students in a large technical and secondary school. The majority of

[6] From the 1990s onwards agriculture was taught in modules for SCOTVEC certificates, mainly at further education colleges rather than schools. An interesting recent development is the new course, Managing Environmental Resources, in the new Higher Still Curriculum which includes some of the more practical aspects of agriculture.

> these were connected with the 'works', where the industry and interests of the townspeople were centred, while the minority came into the town with bursaries from outlying country districts....Applied engineering and chemistry were strong, but biology was weak and relegated to the most part to girl students. There was no good bookshop in the town' (Scottish Journal of Agriculture, 1919:237).

The 'contributor' saw the problem before the teacher as

> 'how best develop the character which makes good in country surroundings either at home or in the colonies. Such a character must be resourceful and able to adapt what comes to hand when there is no shop at the corner; he (or she) must have eyes quick to see and the trained intelligence which is able to draw deduction from things seen, but to refrain from any rigid refusal to profit by new knowledge ie he must love truth better than his own opinion; if moreover, he has acquired a faculty for appreciation colour and form, cinemas may allure him less than the green of springtime or bare branches against a winter sky'(*ibid*).

He comments on the value of field work and that,

> 'those who had been counted "stupid" sometimes came into their own. They could not write essays or learn history, but they could work with plants and animals, and discovered a life interest which might otherwise have escaped them. Excursions not only quickened observation, but led to a recognition of the fact that the country is never dull. Although many people are too dull in themselves to make the most of it, no season of the year is without interest for those with eyes to see'(*ibid*:239).

The recognition that the apparently academically less able might profit from courses related to agriculture is one factor that has been the subject of discussion amongst farmers in the latter half of the twentieth century as farming requires more skills.

The 'contributor' understood this and felt that unless similar teaching approaches were undertaken, there was a danger that the 'promising boys and girls' would receive their education in the town secondary schools rather than remaining in the country schools. He concludes, 'On the other hand the ignorance of townspeople on natural phenomena and agriculture is in need of enlightenment' (*ibid*:239).

The technical school at Golspie founded by the Duchess of Sutherland[7], had at its outset a curriculum that was 'left most elastic, as elastic in fact as is possible...In a new venture of this kind no cast iron system would tend to success. By the early 1920s the curricula included English, Geography, History, French, Gaelic, Maths, Handwork and Art, Agriculture, Natural History, Physics, Chemistry, Dynamics and Physical Education (Beaton, 1991:42).

In 1944 Peddie comments on the curriculum of the Junior Secondary Schools,

> 'Schools in the country have, of course, a rural bias just as some of the city schools tend to specialise in wood and metal work, or in typing, book keeping and shorthand, but such bias is never allowed to let the curriculum get into a lop-sided condition' (Peddie, 1944:49).

From the Junior Secondary Education Memorandum 1955 Hunter (1972) notes that,

> 'if junior secondary education is to achieve success, it must develop its own philosophy, devise its own approach to its own problems, and build up its own traditions...it must resist the tendency to imitate blindly the senior secondary school'(Hunter, 1972:114).

He comments further,

> 'The Memorandum favoured the retention of a traditional subject curriculum, but advocated integration of subjects whenever possible. Recommended subjects for all pupils were: English, mathematics, geography, history, science, art, music, physical education; thereafter there might be a choice from technical, rural, nautical, homecraft and commercial subjects. For determining the content of individual subjects the criteria suggested were utility and interest, and to further the process of integration it was suggested that one teacher might be responsible for teaching more than one subject to each class' (*ibid*).

Even as late as the 1960s it would appear that farming attitudes to education in some areas had not changed from 100 years earlier.

> 'As for the 'practical' pupils, the three fifths who did not aspire to the Scottish Certificate of Education, what most of them wanted was not a vocation based course but a vocation. They would have liked to learn on the

[7] Chapter 1 discussed the establishment and running of this school

job, and their elders on the whole agreed with them'(Third Statistical Account County of Aberdeen, 1965:216).

and

> 'There is the general feeling that with the new leaving age of 15, a boy destined for farming loses more in physical vigour than he gains in mental alertness in the extra year' (*ibid*).

By 1956 it was recorded that there were no fewer than 8 farm schools[8] in Scotland which were under the control of the County Councils (Evans Gordon, 1956:30).

The last of these to retain the farm was Sutherland Technical school in Golspie and it was kept going until the beginning of the 1990s. Of the others the Barony Farm School at Parkgate is now Barony College, a further education college specialising in countryside courses.

In the same year (1956) it is noted in the Annual Report of the Department of Agriculture that the Scottish Association of Young Farmers'Clubs had introduced a Scottish School and Farm Scheme 'with the object of stimulating the interest of young town dwellers in the countryside and in the movement (Department of Agriculture for Scotland, 1957:57-58).

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[8] These were:

Duncraig Castle, Plockton, Ross-shire (for girls)
Balmacara School, Kyle, Ross-shire (for boys)
Lawers School of Agriculture, Comrie, Perthshire (boys and girls)
Lawmuir Agricultural School, East Kilbride (boys)
Kersewell Agricultural College, Carnwath, Lanarkshire (boys)
The Barony Farm School, Parkgate, Dumfries (boys)
Glaisnock House Junior Secondary, Cumnock, Ayrshire (boys)
Sutherland Technical College, Sutherland (boys)

The subjects of agriculture or agricultural science and horticulture continued to be taught in secondary schools for examination purposes up until the early 1990s although never attracting many pupils either at Standard Grade or Higher Level. At the beginning of the 1990s was only being taught up to exam level at six schools[9]. This was down to only three by 1993 the year that the subjects were discontinued (Personal communication with Scottish Examination Board 1994).

Although agriculture is no longer taught as a separate subject, aspects of it continue to feature in geography, history, biology, modern studies and as mentioned earlier, managing environmental resources.

School gardens and the influence of the Agriculture Department and the agricultural colleges

At the beginning of the 20th century schools were encouraged to establish school gardens 'in order to give a practical emphasis to their study of nature knowledge'(Campbell, [no date]:41) and, by 1914, the SED were reporting that there had been a rapid rise in the number of school gardens and,

> 'Their popularity shows no signs of abatement, and favourable accounts have been received from Her Majesty's Inspector in all quarters of the progress that has been made in this branch of instruction, with the help of valuable guidance from the expert staff of the Colleges of Agriculture'(*ibid*).

As an incentive to teachers in the North and West of the country the Board of Agriculture provided a standard selection seeds and plants to each school but in 1913 the Board,

> 'considered it desirable to allow a greater latitude in the selection of seeds, and in the past year teachers were permitted to choose what seeds they

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[9] Websters High School, Kirriemuir
Elmwood College, Fife
Selkirk High School
Kelvinside Academy, Glasgow
St Margarets High School, Airdrie
Lanark Grammar School

> required to the value of £1.00 from a comprehensive list supplied by the Board..... This scheme has in view the encouragement of gardening among crofters, and the Board are gratified to learn that in many cases the pupils receiving instruction at the school garden are enable by the knowledge thus acquired to lay out garden plots at their homes' (Board of Agriculture for Scotland, 1913:12).

In 1913, 326 teachers were supplied with seeds and plants for their school gardens. Expert advice and assistance are given to the teachers by the College Instructors who also submit to the Scotch Education Department and the Board periodical reports on the results of the scheme (*ibid*:xxv).

This demonstrates the influences and connections that the agricultural colleges had with the schools, at least during the first quarter of the 20th Century. It will be shown in a later chapter that this influence also pertained in more recent times. Also, at this time, the Board of Agriculture were responsible for agricultural education.

The use of school gardens has increased in recent times, not for gardening but for environmental studies, encouraged by organisations and schemes such as Learning through Landscapes, Grounds for Learning and others.

Conclusions

Scotland (1969), using the work of Mason, succinctly provides a summary of the place of agriculture in the curriculum,

> ' Agriculture ...was the subject of a series of scholastic experiments by the SSPCK. It seemed clear that rural schools should help boys to become farmers, and the Committee of Council made grants for this purpose in the 1840s. In 1876 it also recognised agriculture as eligible for science and arts grants, and in 1883 it became a specific subject. It had to be examined however and was therefore, like domestic economy, taught mainly from a textbook. Towards the end of the century, it was felt to be unsuitable for elementary schools and faded from their curricula. In secondaries, even in

> country areas, it was never popular; indeed between the wars it was discontinued in many areas. In practice it included horticulture: there were over 50 school gardens in 1909. But 19 years later there were only 8 schools in Scotland with any form of rural course, two doing dairying and six poultry keeping' (Scotland, 1969:81).

However, this does not identify the fact that historically farmers and landowners had been operating a form of social control by providing and encouraging education which would keep their workers in their 'rightful' places in society and will provide them with better workers to increase their economic viability and maintain the rural hegemony.

> '...the farming classes were alive to the motive underlying the movement, although they did not realise the educational value accruing from scientific knowledge of field practice, and that beneath the expressed adverse criticisms there linked the suspicion that farm workers, who for the most part constituted the classes, were inbibing, at hands of the schoolmasters, knowledge of rural lore and method that might affect traditional practice' (Mason, 1935:115).

At the best it would appear to be paternalist, at the worst exploitative. Initially, through their power as heritors, and by individual and small scale experiments (which for the most part appear to have been short lived and not very successful) the landowners were able to control, along with the Church, what the children in their parish were to be taught. This control was maintained to some extent with the introduction of the school boards. As the state gained greater control over the curriculum particularly after the Education Act of 1872 the agricultural influence was still maintained but at a national rather than a more local scale. The colleges of agriculture and the Board of Agriculture became the main influence on agriculture in the curriculum, at least for the first quarter of the 20th century. This was in part due to the popularity of school gardens.

The introduction of agriculture into the curriculum was not without problems. Many of the teachers lacked the knowledge to teach the subject. When it was taught it was

often from a theoretical basis and there was a lack of practical work. Finally, and perhaps most significantly, there was a reluctance amongst the pupils to study the subject as many of them saw education as a way of escaping from their existing lifestyle, not to remaining for the benefit of others. However, there does appear to have been short-lived bursts of enthusiasm for teaching the subject from teachers and those involved with rural land use, a factor which it will be demonstrated keeps re-occurring throughout the 20th Century.

Perhaps the most significant fact to emerge with regard to the primary curriculum is that one hundred years ago agriculture was 'relegated to the realms of Nature Knowledge'. This ensured that it continued and remained as part of the curriculum in the majority of Scottish schools.

However, in 1965 a document was produced by the Scottish Education Department, the Primary Memorandum, which was to have a significant influence on the primary curriculum during the remainder of the 20th Century. The following chapter investigates the significance of this document to curriculum development and, in particular, the continuing selection of farming as part of the curriculum.

Chapter Three

The Scottish Curriculum: the location of farming in the Primary curriculum – a more recent perspective from the Primary Memorandum to the 5-14 Curriculum Guidelines

Introduction

In the previous chapter it was demonstrated that as the farmers and landowners lost their power and control over education and curriculum content, the State (through the Scottish Education Department) and, for agricultural education in particular, the Board of Agriculture, gained control. The theoretical context for the changes in power and control in education will be discussed in the next chapter. However, in the period covered by this chapter it will be shown that although the State was in control of the education system as a whole, it was not in control of the curriculum and was only able to offer schools advice on its content and delivery. This allowed other groups to influence curriculum form and content using a variety of means including resources. These groups included advisory bodies such as the Consultative Council on the Curriculum, the local authorities and their advisory services, teacher training colleges and organisations with specific interests.

In the previous chapter it was also shown that during the first sixty years of the 20th Century the content of the curriculum and the methods of teaching changed very little. However, it was during the 1960s major educational changes began to take place, many of which form the basis for the present Scottish education system.

This and subsequent chapters relate to the curriculum in primary schools and it was two actions taken by the Scottish Education Department in 1965 that had a powerful influence on this. These were the publication of 'Primary Education in Scotland', more usually known as the Primary Memorandum, and the establishment of the Consultative Committee on the Curriculum.

During this period from 1965 until the development of the 5-14 Curriculum Guidelines in the early 1990s, there were other influences developing outwith the Scottish Office which would have significant effects on the way in which teachers delivered the curriculum. These were firstly, the establishment of local education authority advisory services (from the late 1960s onwards), secondly, the vast increase in the use and availability of teaching resources produced by external agencies. All of these have had an influence on farming in the primary curriculum.

This chapter provides the background to the curriculum reforms and developments leading up to the 5-14 Curriculum Guidelines and it identifies the sources of advice on the curriculum and the relationship between the various bodies giving this advice. More specifically it locates the role of farming in the curriculum, identifies the reasons for it remaining as part of the knowledge selected for inclusion in the curriculum. It includes a study of primary sources of curriculum materials from a number of local authorities which allows the identification of the different approaches to the subject taken by these local authorities and schools. It also shows the means by which the curriculum can be influenced including the increasingly influential role played by outside organisations.

Firstly, the background and content of the Primary Memorandum is discussed and its lasting impact on Scottish education is noted. The importance of farming in this document is detailed. Following from this, national curriculum advice from the Consultative Council on the Curriculum (and its successor bodies) together with a number of publications from groups set up by the Council are analysed and the

relevance of farming is again highlighted in the documents. Using original materials from local education authorities, their role in curriculum development and advice is acknowledged as playing a key role, as is that of the colleges of education. During the period under consideration in this chapter, environmental education was introduced in the schools and the history of its development is outlined together with the role played by farming and farming groups in its delivery. It will be concluded that during the second half of the 20th Century the curriculum became a contested area where groups within the control of the State, the Scottish Office, the Education Authorities and the advisory bodies established by the Scottish Office were seen to be competing to maintain control over the curriculum.

The Primary Memorandum

The Memorandum, 'Primary Education in Scotland'[1], was prepared by a group consisting of eight HMIs, three college lecturers, seven headteachers and one first assistant teacher. Their work began in 1962 with the stated purpose of providing:

> 'mainly for teachers and trainee teachers, but also for education authorities, colleges of education and general readers, an up-to-date appraisal of the best practices in primary schools in Scotland and of the principles on which, in the view of those most closely associated with its development over the past decade should be based'(SED, 1965:iii).

It replaced 'The Primary School in Scotland'[2] which was published in 1950 and in the introduction it was noted that a great deal was already happening in primary schools in relation to curriculum change.

As Adams, in 1997, succinctly described it,

> 'the *Memorandum* called for an education which:
> started with the needs and was responsive to the interests of the child;
> was appropriate to age, aptitude and ability;
> saw pupils as active in their own learning;
> would be supported by less authoritarian relationships;

[1] Scottish Education Department, Primary Education in Scotland, HMSO, 1965
[2] Scottish Education Department, The Primary School in Scotland, HMSO 1950

> emphasised the links between subjects;
> left curriculum balance to the judgement of the teacher;
> favoured assessment as a guide to learning rather than a way of comparing pupils; and
> took place in flexible and attractive classroom settings'
> (Adams,1997:9).

Indeed, the document is recognised as, at last, bringing acceptance in Scotland for the work of John Dewey (although, as noted in the previous chapter, SCRE were well aware of his work in 1935), other countries having accepted his philosophies many years earlier.

> 'The child is the starting point, the centre, and the end. His development, his growth, is the ideal. It alone furnishes the standard. To the growth of the child all studies are subservient; they are instruments valued as they serve the needs of growth' (Dewey,1907:22-3).

In a review of primary education in the early 1980s the effect of the Memorandum is noted,

> 'In general the Memorandum had a liberating influence on schools. They became on the whole brighter, happier, more relaxed places. New buildings with experimental designs and light moveable furniture allowed a variety of rearrangements to let groups operate, more talk was encouraged, displays of children's work emerged, partly replacing commercially produced posters, and libraries of paperbacks and modern fiction appeared in many classrooms'(COPE, 1983:12).

The individual schools were responsible for the final content of the curriculum, and the Memorandum points out that,

> 'Much of the content of the curriculum will vary from school to school, class to class within the same school, in certain instances from pupil to pupil within the same class, and from one time to another as other circumstances change. It is for each headteacher and his staff to determine, in their own situation and with their own special knowledge of their pupils, precisely what is to be included and what part it is to play in their pupils' educational development' (SED, 1965:38).

Although the final content of the curriculum was the responsibility of the teacher, the Memorandum suggested how the time should be allotted to the different aspects of the curriculum,

> 'A "tri-partite curriculum" thus developed which differed in content, scope and balance from time to time and from stage to stage in the school, but it was suggested that about one third of the time be spent on Language Arts, one third on Environmental Studies and one third on the remainder'(COPE, 1983:11).

It was in this document that the term 'environmental studies' first appeared,

> 'History and geography take their place along with science less as subjects in their own right than as aspects of environmental studies, through which the pupils can investigate and understand the past and the world around them'(SED, 1965:35).

The demise of nature study and its incorporation into Environmental Studies is noted,

> 'Natural and physical science have replaced the traditional nature study and now provide opportunities for pupils to explore the scientific aspects of their environment through observation and experiment' (*ibid*:35).

The Memorandum suggests that

> 'In environmental studies, time will be available for selected "patch" studies, sample studies, scientific investigations and the development of centres of interest if teachers abandon much of the exhaustive factual information which formerly was taught in the name of history, geography and nature study' (*ibid*:37).

Rural land use, particularly farming, was included in Environmental Studies and suggestions were given regarding farming projects. In Chapter 20 Environmental Studies, it is suggested that for Classes P1-PIV

> 'A model of a farm is sure to delight and interest children; some may wish actually to model the farm and the animals; others who have small animal toys at home may wish to bring them to school and place them in position on the model; and through discussion the children will learn of farm produce, both animal and vegetable, and perhaps something of the cycle of activities on the farm. Wherever possible, the children should engage in simple practical tasks such as preparing soil, planting seeds in a classroom garden or outside, or making butter in a simple way'(*ibid*:128).

For a topic on local studies it suggests,

> 'When appropriate, attention might also be directed to animals, crops and other products of the farm. Thus if a teacher is focussing attention on the farmer and farming activities, different types of soil and the plants and animals found in them might be introduced in an elementary way. In rural

> areas the farm might be studied in closer detail. Investigations might include the cycle of operations throughout the year, the types and numbers of animals in particular farms, times when young are born, and the number of young per birth, animal foods in summer and winter, farm products and their marketing' (*ibid*:131).

At an older level it suggests,

> 'In PVII a very general study of a topic such as world food supply may be approached from several points of view...It may be appropriate to introduce experiments on the preservation of food, on the germination and growth of crops, and on the control of pests'(*ibid*:132).

The Memorandum also noted that there was a very definite place for field studies at all stages in urban as well as rural schools, provided that the places chosen for visits or investigation are appropriate to the age of the pupils. Thus farming had a firm place in the Primary curriculum.

The Memorandum recommended that

> 'subject-centred curricula give way to methods and curricula based on the needs and interest of the child'(*ibid:*60).

and it avoided prescription of either subject matter or methods, rather it provided a source book of suggestions rather than the outline of any particular scheme. This change away from subject–centred curricula combined with the lack of prescription and the encouragement of more project-based studies provided opportunities for a wider variety of materials and resources to be used in the classroom. Scotland records that 'quite as startling as the curriculum changes were the multiplication and diversification of teaching aids' (Scotland, 1969:207). It appears that films and slides were the first to be introduced followed by schools programmes from the BBC which were introduced in 1957. However, it is noted that teachers did not embrace these new teaching aids and there was a 'general mistrust of 'gimmicks' particularly mechanical ones' and that

> 'The success of teaching aids in fact, as critics entirely pointed out, lay in the use teachers made of them. At their best they opened doors out of the classroom to countries far away, in the world, in space or beyond the microscope... They might on the other hand be no more than 20 minutes isolated respite from the hard grind of "proper study"' (Scotland, 1969:209).

This use of different resources and the potential for taking the pupils out of the classroom also gave the opportunity (and often encouragement) for external organisations, often representing interest groups, to become involved in the delivery of the new curriculum. The Committee on Primary Education (COPE) noted that in the late 1960s and 1970s,

> 'a whole wealth of structured materials and "learning packages" linked to worksheets commercially produced or painstakingly devised by individual teacher effort, with varying degrees of success, and with implications for classroom organisation and methodology that were not always fully thought out'(COPE, 1983:20).

In retrospect the Primary Memorandum was considered to be a watershed document, not only in Scotland but in other parts of the UK as noted by Plowden[3], for example. It remains so today,

> ' The Primary Memorandum constitutes a landmark which has from time of publication dominated the developing primary education scene...The thinking of the Memorandum has permeated Scottish primary education: its tone still remains a dominant influence, despite some inimical trends in UK politics...To this day, the primary education experienced by many Scottish children is very much as envisaged in this seminal document'(Darling, 1999:29).

However, it appears that not all schools took up the suggestions and that those that did often took a considerable time to implement the changes. Later reports also note that many teachers, while aware of the report, did not appreciate its contents, 'most teachers are aware only of slanted accounts of its contents rather than what the document itself actually says' (COPE, 1983:10). Adams[4], in his article in TESS, commented that many teachers were unsure of how to integrate the new subject areas and that the child-centred approach was not totally accepted,

> 'Yet there is no evidence that any Scottish teacher abandoned everything to a curriculum dedicated solely to children's interests, nor that many subscribed to the view that it did not matter what children knew as long as they found out for themselves. Indeed, a 1980 HMI survey of learning and teaching

[3] Plowden Report- Central Advisory Council on Education, Children and their Primary Schools HMSO 1967

[4] Adams, Frank, Scottish schools in vanguard, TES Scotland Primary Update, January 24 1997

among eight and eleven-year-olds noted that: "The Scottish primary school teacher insists on making her pupils literate and numerate. She does not, however, sufficiently recognise that there are fields of human experience and competence beyond these"'(Adams, 1997:9).

The headteachers' new responsibility for the school curriculum was also not without problems and, as Adams notes,

> 'Headteachers had, quite suddenly, been left with the responsibility for implementing two new concepts: that of a curriculum rather than a syllabus and that of flexibility'(*ibid*).

The COPE Report refers to an earlier SED Report,

> 'Primary Education: Organisation for Development (1971)[5] which complained that in spite of the argument in the Memorandum for devolution of a great deal of responsibility to head teachers for the curriculum management in schools, few had done anything to formulate a policy of planned implementation of approaches suggested in it. "Where class teachers have abandoned their traditional methods and programmes of work they have frequently found themselves unsure of how to proceed; many head teachers have not been able to give them constructive help because they lacked the experience and the confidence to do so"' (COPE, 1983:13).

However, help and guidance on curriculum content and its implementation was to come, at a national level, from the Consultative Committee on the Curriculum (CCC) and, at a local level from the local authority education department advisory services.

National curriculum advice

The Consultative Committee on the Curriculum was established by the Scottish Office in 1965, the same year as the publication of the Primary Memorandum. It was not a statutory body as the previous Advisory Council had been but purely an advisory committee 'charged with the general oversight of the curriculum and with no executive powers' (McPherson and Raab, 1988:320).

[5] Primary Education: Organisation for Development, SED HMSO 1971

Its general remit was: to maintain a general oversight over the school curriculum, both primary and secondary; to draw attention of the Secretary of State to any aspect of the curriculum, whether general or particular, which seemed to call for consideration by specialist bodies; and to comment on the recommendations made by any working party appointed by the Secretary of State on its advice. The aim is to keep the school curriculum under continuous review (SED, 1969b:5).

Much has been written about the CCC (Humes 1986, McPherson and Raab1988), its impact on the curriculum and on the influences, and often conflicts, of those involved particularly from within the SED. Initially, SED retained as much control as possible, but at the beginning of the 1980s changes began to take place. The chairmanship passed from the Secretary of the SED to a headteacher, an appointment which was seen

> 'as symbolic of the change already well established by then in the dominant model of curriculum development and change. Whereas an earlier model assumed that the deliberations of an able few could be distributed to a wider regional or national school force for implementation, it is now recognised clearly that unless teachers are involved as fully and realistically as possible in the process of change, at the stage of formulation and not merely that of implementation, little effective development is likely to take place' (COPE, 1983:7).

In 1987 the CCC became an incorporated body, the Scottish Consultative Council on the Curriculum (SCCC), with funding for its activities coming from the SED. It has been recognised that it had its greatest influence in the 1980s (Ross, 1999) and the publication of Education 10-14 is acknowledged as another watershed document. However, this was not due to its content rather than the government's refusal to accept the recommendations of the report and, instead, it initiated the 5-14 Development Programme.

During the 1980s a number of subcommittees were established to look at specific aspects of the curriculum, most significant to this research is the Committee on Primary Education (COPE). In turn COPE had a number of advisory groups reporting to it, for example, Education/Industry (SEIC), Special Educational Needs

(COSPEN), Computing (MEC), and Technology (COT). In addition to these there were also national projects and development programmes on curriculum areas such as Environmental Studies, Scottish Resources, and Education 10-14 (Humes, 1986:90).

The Committee on Primary Education (COPE), which replaced the Central Committee on Primary Education in 1972, produced a number of documents and papers 'all designed to involve school staffs actively in the work of curriculum development' (COPE, 1983:80). The committee consisted of headteachers, advisers, parent representatives, staff from the Scottish Council for Educational Technology (SCET), the Department of Education, Stirling University, Scottish Council for Research in Education, Scottish Curriculum Development Service, Directors of Education, HMI Chief Inspector of Schools and an educational psychologist.

Whilst it can be seen that this as with many earlier committees consisted of teachers and other educationalists, it is interesting to note that there are no subject experts from outwith the educational field to provide advice on curriculum developments in specific areas such as, for example, farming and conservation.

In 1983 the Committee produced a position paper on primary education with recommendations and suggestions for the next CCC. It noted that the mood within the teaching profession had changed during the 1970s from 'optimism to disappointment and unrest' as demonstrated by teachers' strikes and teachers' contracts. The public were also unhappy with education,

> 'Public suspicions that the education system was not giving value for money were encouraged by the media, the Great Debate[6] and cries of "Back to Basics", which usually meant a "core curriculum" of the 3 R's' (*ibid*:14).

In the late 1990s the same cries are often heard, mainly from politicians.

[6] The Great Debate- a debate on education initiated by James Callaghan, the Labour Prime Minister in a speech at Ruskin College Oxford in October 1976 where he criticised schools for failing to provide suitable manpower for a modern industrial society (Lawton 1989:37)

COPE recognised that, in addition to the number of policies set out in the Memorandum that had not been adequately realised, other issues had arisen in the intervening years. Those relevant to this thesis were:

- The different ways of representing the purpose and contents of the curriculum, eg the concepts and skills approach;
- The changing views on purposes and policies in the major areas of the curriculum – Language Arts, Environmental Studies and Expressive Arts;
- The increasing need for fully effective use of resources for teaching and learning – especially the introduction of such resources as microcomputers and their relationship to curriculum and classroom organisation (*ibid*:15).

The concept and skills approach originally started in mathematics in the late 1960s the "scheme of work" was replaced by

> 'a curricular approach founded on a set of developmental concepts through which a child would move in his own way and at his own pace...The intention is not to teach the names of certain concepts and skills but to ensure that after the teaching/learning is complete some awareness of the concepts will have been internalised by the pupils, and a capacity to exercise the skills acquired at some level' (*ibid*:20).

The relevance of this approach is discussed later in relation to schemes adopted at a local authority level and the 5-14 Guidelines.

The Scottish Committee on Environmental Studies in the Primary School (SCES) was established by COPE in 1976 and, as was the accepted custom, consisted of an Assistant Director of Education, Head Teachers and Assistant Head Teachers, Advisers, an HMI and representatives from colleges of education. In 1981 it published a policy paper on environmental studies in the Primary school, 'Environmental Studies in the Primary School –the Development of a Policy (COPE 1981). The SCES expressed the view that, even sixteen years after the publication of the Primary Memorandum,

> 'the practice of environmental studies in schools had been haphazard, inefficient, unstructured and lacking real commitment despite an almost universal acceptance of the need for this aspect of education in the world of today and tomorrow' (SCES, 1981:1).

They recommended that the teaching of the subject should become even more child-centred. They also recommended that there should be a gradual development of six basic skills and nine basic concepts. These are shown in Table 3.1.

Table 3.1 Skills and Concepts Approach suggested by SCES

Skills	**Concepts**
1. Researching	A. Adaptation
2. Recording	B. Cause/consequence
3. Interpreting Experiences	C. Change/stability
4. Experiencing and Feeling	D. Conservation
5. Relationships	E. Evidence
6. Positive Attitudes	F. Independence/Interdependence
	G. Location
	H. Similarity/Difference
	I. Time

(Source: SCES, 1981:2-6)

The report recommended that the schools should use the concepts and skills approach in planning the Environmental Studies curriculum through a series of topics which were to be,

> 'treated in such a way as to ensure that learning involves activities and experiment, and that teaching is interesting, outward looking, and concerned with understanding rather than merely remembering' (*ibid*:8).

It was suggested further that the regions should consider developing

> 'a prescribed but broadly based programme of appropriate content by which the Concept and Skills can be developed' (*ibid*).

and that these programmes should be developed by working parties and through the regional advisory services.

In relation to the resources that the teachers were to use the following was suggested:

1. Individual schools should ensure that staff are aware of resources available within and outwith the school.

2. Individual schools should make full use of the resources, the experience and expertise within themselves, in colleges of education, in the regions, and in other agencies to continue and to initiate relevant in-service training (*ibid*).

Examples of the responses to these recommendations by regional educational authorities and the means by which environmental studies was implemented in selected regions is discussed in detail later in this chapter.

The SCES report also contained 14 exemplars and these are give in Table 3.2.

Table 3.2 SCES Exemplars

Me	Myself and My Family	Our Street
The Great Fire	Stories from Scottish History	Minibeasts
A Local Water Study	Rivers of Scotland	Farming
Local Community Study	Break for Freedom[7]	France
Scotland in the Time of Wallace and Bruce		City Study

Significantly for this thesis, the reasons why farming should be included in the curriculum were given as:

1. Farming as a topic in its own right

(a) We depend upon the food produced.

(b) Industry depends upon the raw materials produced.

(c) Farming is a major industry in Scotland producing employment for many people either directly or indirectly.

(d) Farming is a major source of national wealth.

[7] Break for Freedom: a novel by Ewan Clarkson about the hunter and hunted, based on Dartmoor.

2. Farming is important as an environmental issue involving

(a) Man/land relationships

(b) Crops and animals/physical conditions relationships

(c) Various other issues e.g. conservation, pollution, land use conflict, use of chemicals on the land, intensive or factory farming methods, right-of-way of the public, impact of farming methods on the environment including plants and wildlife (SCES, 1981:36-38).

The concepts and skills that could be developed during a farm study are given in detail and are shown in Appendix 5. The report recommends that a farm study requires a multi-disciplinary approach and that a least one visit to a farm is essential. References are also made to farming in several of the other exemplars given and include:

A local water study	siting and different uses of farm land loss of farmland through compulsory purchase relationship of river to industry, farming, settlements, transport
Minibeasts	use of pesticides to aid farmers – many carnivorous birds die pest control – problem of pesticides
Rivers of Scotland	Upper reaches –hill farming/crofting areas – no longer viable- Dependent on tourism
A local study	Aspects specific to local environment –1. Industries eg farming, fishing, mining, manufacturing
France	Limited area study –farming/industries River study – produce Whole Country – landuse, food
Break for Freedom	Chapter 4 – farmer, dependent on farm-unequal struggle

The examples given are the most direct references to farming but the subject could also be included elsewhere within these projects. The frequent references to farming provide evidence that it was regarded as a significant topic for inclusion in

Environmental Studies curriculum and that it provided a means of gaining skills and developing an understanding of concepts. No reference was made to this only being carried out in rural schools. It was expected that a farming study could be carried out in an urban or rural primary school.

Advice on the implementation of the environmental studies policy was provided in a subsequent publication, Policy into Practice, An Aid to School-based In-Service. (COPE/SCES, 1984) In this publication, which was based on work carried out in a number of primary school together with reports from HMIs, examples are shown of the guidance given to staff on the selection of topics. These are given in Appendix 6 and for the purposes of this work, farming has been outlined in bold. Appendix 6a indicates work from the schools which took part in the research for the report, Appendix 6b reflects topics from HMI Case studies. What both of these example clearly show is that farming had prominent place in the Environmental Studies Curriculum in the 1980s and that P5 was considered to be the appropriate stage for its inclusion in the school plan. It is significant, however, that both Scottish Office through the HMIs and the committees of its own advisory council were both producing similar work. The question must be asked as to why there was this apparent duplication of work. It is possibly a reflection of the power struggle between the two which was to become further evident immediately prior to the introduction of the 5-14 Guidelines.

Another Committee whose work is relevant to this research is the Scottish Education/Industry Committee and which considered agriculture as one of Scotland's main industries. In 1985 this Committee held a conference at which three of the speakers represented the Association of Agriculture. Subsequent meetings were held with representatives of the agricultural industry to discuss the potential for developing resources and school farm links. (Association of Agriculture papers, 1985)

Education –Industry Liaison had been an active part of mainly secondary education in Scotland since the 1960s following a report published by the SED, From School to Further Education (SED 1963). In 1967 the Scottish Committee for Schools/Industry Liaison was established with the remit

> 'to stimulate co-operation between schools and industry, to encourage the setting up of local organisation for this purpose and to provide an exchange of information about local liaison schemes' (Highlands and Islands Development Board, 1975 :9).

The Committee took the word industry to include industrial, commercial, agricultural and other occupations. In the very first Bulletin produced by the committee amongst other things it reports on 'liaison with agriculture'.

Education –Industry Liaison (or Links as it is now known), although initially intended for secondary schools, is now present at all levels in both primary and secondary curricula. An early example of the way one local authority used agriculture as a topic in primary schools for EIL work is in Grampian Region. In the 1980s farming had been included as a unit in the Schools/Industry Liaison Industry Project and for a time part of the region had a successful school-farm links programme in operation. Farming was chosen as an example of primary industry and the Unit was developed by the Industry Study Group (ISG). It used both the SCES skills and concepts approach and a number of its own concepts which were:

Scarcity	Specialisation/Interdependence
Supply/Demand	Profit/Loss
Role of Price (Inflation)	Competition/Monopoly

(Grampian Regional Council, 1982).

The general framework of the project was based on Wants, Resources, Production and Exchange and in the details it refers these as general concepts.

This type of project was recognised by the agricultural community as being a useful means of using the curriculum to influence the teachers and the school population

and they encouraged such projects further by various initiatives including the 'Farming in Scotland: A story worth knowing' publications.[8]

Again this demonstrates that farming was not only an important part of the curriculum but also that it was not restricted to one location within that curriculum.

The 1980s saw a flurry of reports and activities relating to Environmental Studies (Stark 1999) and, in 1983, COPE identified this area of the curriculum as in need of a major initiative. In response to this and also as a result of an HMI Report in 1984[9] the SED established the Primary Education Development Project in the same year. This was a major initiative to study and test new methods of teaching and learning in the primary school. It was planned to last for 5 years and it was proposed that,

> 'it will build on children's natural interest in the world in which they live and about which they are always learning. Environmental Studies will be of central importance in the Project but it will also incorporate a scientific approach to learning and give relevance to the development of basic skills of language and mathematics' (SEEC, 1985:12).

The PEDP had as one of its main aims the production of model programmes of work in environmental studies based on the HMI Report (SED 1984). The purpose of the project was to offer guidance and recognised that 'no one model would exactly fit the circumstances of any other school'.

The proposed programme was based on 5 principles:

Laying the Foundations

Learning and Teaching

The Framework

Contexts

Evaluation

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[8] See Chapter 2 for details of this initiative organised the National Farmers' Union of Scotland.

[9] Learning and Teaching: the Environment and the Primary School Curriculum A paper by HM Inspectors of Schools SED Edinburgh 1984)

It recommended that the framework for environmental studies should be based on four Fields of Study namely 'places and spaces', 'looking backwards and forwards', 'how we live together' and 'looking in and around'. Details of these fields of study are given in Appendix 7.

To support the proposed school programme the PEDP produced a number of topic packages including one on farming and an extensive database of resources, 'Studies of the Environment: Resources for learning and teaching' for use with the topics. The programme was also piloted in a number of schools.

The reason for farming being included in the curriculum is given as,

> 'Farming has been an activity central to our existence for thousands of years. It remains a key aspect of life today. People everywhere require food whether they live in small villages or great cities. Although methods of production vary enormously there are, nonetheless, recognisable common features. Farming is the most widely practised form of land management and therefore should be part of any school's programme, whatever the location' (PEDP, no date:2).

The aims of the package are given as:

1. To determine the children's understanding of 'farms and 'farming'.
2. To help children understand that farming helps us satisfy a number of our basic needs through a controlled use of the natural environment.
3. To help children understand that farming is largely an economic venture.
4. To help children understand the place of farming in the production –consumption chain.
5. To help children (through a visit to a farm and related activities) understand the routine of farming
6. To help children understand the considerations determining the type of farming undertaken in different locations.
7. To encourage an awareness of the continuing changes in farming methodolgy and technology and the consequent effects on the environment.

8. To encourage an awareness of, and the formation of attitudes to, issues surrounding farming (e.g. land use and conservation, meat production and consumption, environmental issues).
9. To provide opportunities for learning across the curriculum through active investigation of the environment (*ibid*:3).

The package contained a number of different units eg farm produce, a farm visit, historical aspects of farming and technology. It suggested that teachers contact the Association of Agriculture for both farm visits and resources.

The accompanying list of resources revealed approximately 135 different resources ranging from booklets, slides, fiction, tv schools' programmes and material produced by a variety of organisations with interests in farming.

The draft Farming pack was offered to 36 PEDP pilot schools for trialing in 1986/87 and the schools were visited by Development Officers and HMIs who took both oral and written evidence. However, not all the schools undertook the farming package as they were also offered other packages to select from. In 1987/89 the Farming package was made available to the 10% of Primary Schools taking part in the more extensive piloting. Written evaluations were produced by the schools, gathered together by the local authorities and then passed on to the PEDP. All the comments were put together to help with the preparation of the final draft. (Personal Communication with member of SCCC staff February 1994)

The programme was finally phased out in the late 1980s following the publication Curriculum and Assessment in the 1990s and the subsequent work on the 5-14 Development Programme. However the PEDP staff were asked to complete the redrafting of materials to the 'camera-ready' stage and to share these with the RDG3[10] members in confidence.

[10] RDG3 – Research and Development Group 3 for developing the 5-14 Environmental Studies Guidelines.

In 1990 it was decided that no PEDP Packages were to be published until after the conclusion of the Review and Development group process and the issuing of the national guidelines in the final form after which the position would be reviewed. By 1994 the SCCC had been contracted by SOED to produce a set of seven titles based on the work of the PEDP but now relevant to the 5-14 Guidelines. Farming was not included in these titles (*ibid*).

Role of education authorities

The reports and publications referred to above were all of an advisory nature because

> 'neither the Secretary of State nor the Scottish Education Department, has any direct responsibility for the school curriculum. Education authorities (and other bodies who manage schools), acting with the advice of the heads of their schools and their teachers, decide what shall, or shall not, be taught in their schools (subject to statutory requirements for the provision of instruction in religion) and it is for them to decide whether or not to accept any advice which is offered to them' (SED, 1969b:5).

All the reports referred to above contain recommendations for implementation by the individual local authorities and their schools. The way in which these recommendations were or were not used in the school curriculum was usually related to the advice produced through an advisory service. Although local authorities began to employ curriculum advisers during the 1960s, it was not until local government reorganisation in 1975 that the advisory services developed substantially, particularly in the larger regional authorities such as Strathclyde, Lothian and Grampian. For example, Lothian developed its own Regional Consultative Committee on the Curriculum. The process of implementing the advice provided by the national committees was not always straightforward and Ross notes that the relationship between the education authorities and the SCCC was not close, despite individuals being involved on the various committees and that there was no formal means of communication between the two (Ross, 1999:183).

In the following paragraphs examples of curriculum advice produced by the education authority advisory services are given to demonstrate the variation on curriculum development in the different regions of Scotland.

Lothian Region

As mentioned in a previous paragraph Lothian region had initiated its own consultative committee on the curriculum and its "Sub-Committee Report on Environmental Studies"[11] published in 1977 is acknowledged as anticipating the SCES paper on Environmental Studies (SEEC, 1985 :10).

The Lothian Region Environmental Studies policy paper of 1986 refers to this earlier report and acknowledges that 'there are new thrusts in the curriculum', particularly the concept-skills approach. The concepts suggested are:

Causes/Consequences
Continuation/Change
Interdependence
Similarities/Differences

This later report acknowledged that others (COPE,1982 and SED,1984) had recommended other and more concepts (9 and 15 respectively) but their view differed:

> 'The view of the 1977 Sub-Committee, which has been reinforced by in-service training and dialogue since then, is that the force of teaching through concepts is likely to be dissipated by trying to teach them in pairs or groups, and that the four concepts listed above are such powerful curriculum organisers that other concepts can be associated with them, if necessary, in a dependent way' (Lothian Regional Council, 1986:14).

[11] Lothian Regional Consultative Committee on Primary Education, Sub-Committee on Environmental Studies (1977): Environmental Studies

It is noted that The Schools Council publication "Place, Time and Society 8-13" was acknowledged as influencing their thinking.

Amongst recommendations it is suggested that policy meetings of staff should be held at regular intervals to discuss details of the curriculum and how it can be implemented. An Assistant Head Teacher should have the responsibility for the detailed implementation of the school's Environmental Studies policy.

The document notes that the publication of regional checklists is not compatible with the proposed policies because:

1. 'the study of the environment must start with the first-hand, with what is locally observable, subsequently moving on to wider studies which should relate to the first-hand start, and
2. that the school, within the Regional recommendations, work out its Environmental Studies programme' (*ibid*:12).

The Report notes that

> 'The orthodox view is that any curriculum should attempt to being about change under three headings:-
>
> Attitudes
> Knowledge and Understanding
> Skills (*ibid*).

Throughout the document frequent reference is made to the use of a farm as a means of delivery certain aspects of the curriculum, for example:

> Progressive development –range of resources available in region – museums, art galleries, buildings of historic interest, Country Parks, Royal Botanic Garden, Zoological Park, farms, and the Farm Adoption Scheme (Organised by the Association of Agriculture), trails of various types.
>
> Pupils should have had experience of the following natural environments: a river, moorland, hill or mountain, seashore, a farm and a wood (*ibid*:9).
>
> 'Thus from a Farm Study, children in a rural area could be expected to have had already some acquaintance with farming as a result of earlier work or local knowledge. A Farm Study in p4 involving the concept of Causes and Consequences would build on that acquaintance and explain much of what

> takes place in the agricultural landscape. For urban children, the Farm Study could be their first proper look at the countryside and the concept of Interdependence would be a useful one with which to demonstrate how the farmer and the urban child are in the same society, not in two different worlds, that we need the farmer to provide the milk for our breakfast, while he needs the city markets and services to survive financially' (*ibid*:15).

The report suggests a programme for Primary 4-7. Four topics should be undertaken- three Main Topics plus one topic of which is left for the individual school to choose. Each of the topics should be tied to one of the four main concepts. In Appendix 8 the Farm Study is highlighted to show how the Advisory Service perceives the difference between schools located in different areas. Again the main level for the study of a farm is P5, although it suggests P4 for a rural school.

It is also noted in the report that

> 'The concepts listed are the main concepts but must not be seen as exclusive to that topic eg the urban child should also be aware that there are Causes and Consequences in farming ("Mr Allison ploughs manure into his fields because...")'(*ibid*:20).

In the Development of the Themes section a Farm study is given and this is shown in Appendices 9a and 9b.

As noted earlier the report makes reference to the Adopt a Farm scheme but this was not the only scheme operating in the Lothians in the 1980s. In addition to Oatridge Agricultural College which took school visits around its farm, the Scottish Agricultural College had a Manpower Services Commission employment scheme which worked closely with advisers from Lothian Region on a series of resources for the schools in the area. Ample opportunities were thus available for the schools to undertake the farming projects.

The Lothian Region policy documents such as the one mentioned above, were used by teachers at a more local level to produce their own programmes for environmental studies. An example of this is Whitburn and Fauldhouse Primary Schools

Environmental Studies Programme May 1985. This work was produced by local area working party consisting of teachers from six primary schools. They had assistance from staff from Moray House College of Education and Regional Advisory staff. Although it was published slightly in advance of the regional document it is doubtful that those involved at this local level were not aware of the regional proposals.

The concepts adopted by this group were: cause and effect, change in continuity, similarity and difference and interdependence. These were very similar but not exactly the same as those recommended in the regional documents. The report suggests that the topics selected must cover these concepts as well as aspects of Natural Life, People, Places and Time. It is also suggested that they could be organised seasonally 'to capitalise on observable changes around us' (Fauldhouse and Whitburn Primary Schools, 1985:19). In the examples given of three schools topic plan for P1-3 farming appears in in various forms such as: Farm, Farm Animals, Story of Wool, Bread, Milk, Farm in Winter and at varying stages (*ibid*:19-21). It suggests that a Farm study should be undertaken in P4.

Exemplars are given of such topics as:

Wheels and Transport	The Vikings	Under The Ground
Zoo Animals	Local Shopping	Farm Study
Children, Near and Far, Now and Then		Woodland
Other Settlements	Transport	The Sea
Scotland	River Study	Communications
Fuel and Power	Our Community	Growth of the City
World Disasters	Natural Disasters	Other Cultures
Another Country	Materials We Need and Use	

It is noted that there are links between these topics and that, while detailed reference is given here of the farming topic, others such as Under the Ground (concentrates on growing vegetables) and Local Shopping also contain references to farming.

In the farming topic the main concept is considered to be interdependence and the objectives of this topic are given as:

1.Knowledge of:

(a) Vocabulary relevant to farms and farming

(b) Some of the skills the farmer needs

(c) Ways in which crops are grown

(d) The importance of weather, the seasons and soil in the routines of cultivation

2.Understanding of:

(a) our dependence on farmers for a selection of foodstuffs

(b) the mutual interdependence of consumers and producers

(c) some aspects of the interdependence of farmers, workers, animals, soil and weather on the farm

(d) the importance of hygiene in food preparation

3. Attitudes:

(a) of care and concern for the countryside application of the country code

(b) of care and concern for the welfare of animals

(c) leading to positive views on safety

4. Skills

Observation and recording on field visit

Using and making pictorial maps and models

Discussion, description and creative writing

Communication of findings through, for example, a frieze showing a production sequence, songs and dramatic episodes

Experimental work on, eg, crop growing and butter making

Graphic work eg survey of breakfast

5. Enjoyment

Through some of the interesting and satisfying activities possible in environmental work.

In the Procedure it notes that the topic relies absolutely on a visit (or visits) to a farm (*ibid*:32).

The influence of Moray House College of Education can be seen here not only from the fact that their staff assisted in the working group and published the final report. The College produced a large amount of resources for teaching environmental studies and these are referred to in a later paragraph.

Tayside

This region had established an Environmental Studies Working Group and, in 1988, it produced a school based INSET package (in three parts) for Environmental Studies based on the philosophy adopted by the PEDP. The framework for Environmental studies is given as:

- Places and Spaces
- Looking Back and to the Future
- How we live together
- Looking in and around

A chosen theme eg the example is given of transport, could come under this framework through different topics. This is shown in Appendix 10.

A farming topic could be developed in a similar way to the above although it would appear that Places and Spaces and Looking In and Around are the most relevant area. Again it is the responsibility of the individual teachers to select the topics with the documents providing guidance in the methodology to be used in this selection.

The terminology 'Key Ideas' and 'Key Learning Experiences' are used in this methodology. The earlier SCES concepts approach appears to have been superceded by the PEDP approach.

Central Regional Council

This region produced a staff development package, Primary Environmental Studies (1990), which would incorporate the programmes produced by the PEDP. The three stated aims of Environmental Studies referred to Knowledge and Understanding, Skills and Attitudes. Concepts are referred to but not specified as such because

> 'it is suggested that a concept be understood as an area which forms in a child's mind through sensory experience or by working from a variety of examples and situations over a period of time. Concepts cannot therefore be taught simply as dictionary definitions' (Central Regional Council, 1990:10).

The report refers to the fields of study identified by the PEDP –

> The Physical Environment – places and spaces topics
>
> Past and Future Environments – looking backwards and forwards
>
> The Social Environment - how we live together
>
> The Living Environment - ourselves and other living things in the environment

As this is a staff development package rather than a more prescriptive curriculum package such as the Lothian Regional Council example, it is by nature very general and only one exemplar is given of a local environment. Farming does feature in this as the area contains an auction mart. In the list of other agencies able to provide assistance the Scottish Farmers' Union (*their wording*) is one of only six listed.

An example from a school within this region published in the same year demonstrates the ways in which individual schools implement the Environmental Studies curriculum. In this school, Stenhousemuir Primary School, a story centred approach was used in P1-3 classes. Farming appears as an extension subject for 'The

Big Sneeze' which relates to farm animals and disasters (Milne, 1990). The 'main points of knowledge' will be:

> Children should be able to name the people, animals and crops on a mixed farm.
>
> Children should be able to describe the work done by farm workers over the year.
>
> Name the animals and their produce.
>
> Name the machines and their uses.
>
> Describe the effects of favourable/unfavourable weather conditions
>
> Have some knowledge of different types of farms (Milne, 1990:9).

Grampian

In 1988 Grampian Regional Council produced a series of documents 'designed to give support to schools in planning and implementing Environmental Studies. The package consisted of:

Primary Education:	Statement of Principles
Primary Education:	Extract of Principles
Environmental Studies:	A Context for Learning: Outline
	A Context for Learning
Environmental Studies:	Into Action Booklets
	Introduction
	The Theme
	Methodology
	Organisation and Planning
	Development of Learning
	Assessment

These were produced by a group of regional advisers who advocated a child centred thematic approach but did not give any suggestions for themes or topics rather they asked questions to help to stimulate the answers from the teachers and which were

relevant to their individual school. In A Context for Learning: Outline, the document noted the influence of the earlier SCES reports,

> 'Many teachers have been influenced by the SCES advice to concentrate on the Why? And How? rather than the What? Consideration of concepts, skills and attitudes has helped make Environmental Studies in the classroom more structured, more progressive and more purposeful'(Grampian Regional Council, 1988:2).

Recognition is given to concepts, skills, attitudes and knowledge but they criticise these terms because they are

> ' adult orientated but do not attempt to provide a structured framework within which a teacher can organise her thinking towards providing activities and experiences through which children progress...'(Grampian Regional Council, The Theme 1988:5).

Each school was thus able to devise its own topics for study based on the interests and existing knowledge of their pupils.

The above examples from the different regions provide evidence to demonstrate the ways in which national advice, such as that produced by SCES and PEDP, is used and translated by the regional authorities. They do not all agree with the national advice and tend to use terminology which may be similar but is not the same. Indeed, at a school level the advice is again re-interpreted and another set of terminology comes into use. The concepts and skills approach had been adopted by some local authorities but it is interesting to note that terminology such as Knowledge, Understanding, Skills and Attitudes (plus Enjoyment) was being used by at least one of these authorities.

As noted in the Grampian documents, and which was also demonstrated in the other areas, each school was thus able to devise its own topics for study based on the interests and existing knowledge of their pupils. This is particularly significant for this thesis as the existing knowledge and interests of the pupils (and the teachers) will, for the majority, be based on urban experiences.

Farming was frequently used as a topic of study in the examples given and details of what the topic should cover and why it should have been included were also given. It is not known how many of the schools undertook this topic but the detailed regional documents suggest that it is an integral part of the Environmental Studies curriculum in both urban and rural schools.

Colleges of education

Colleges of education were involved in curriculum development work not only for their students but also for practicising teachers and In-Service work. The above has demonstrated that the individual schools and teachers were responsible for the content of their school curriculum. Advice from colleges through initial training and later in In-Service work is therefore very important and it will provide them with some, but not all of the knowledge that they bring into the school.

For example, as noted previously, Moray House College of Education produced a large number of resources for use in Environmental and Social Studies Teaching under the title 'Resources for Environmental and Social Studies Teaching' known as the RESST Series. These were available to all teachers at a small charge. These were produced during the 1970s and 1980s and the college book list in 1988 reveals over 60 titles plus videos, books and filmstrips.

One of these publications was directly related to farming, Food and Farming (A P7 Study), others contain references to farming, for example, No5 Geographical Ideas, Skills and Terminology which is aimed at upper primary and S1-S2 in the secondary schools. In the introduction to this publication a number of different concept lists are provided and which are considered as helpful starting points only and further explanations are required for a greater understanding of their significance. They consider that the scope of the concept of geography is concerned with 'place', the 'folk who live there' and 'the work they do'. The publication is intended to provide the teacher with a checklist 'to aid the teacher in his/her selection of ideas and skills

to be taught'(RESST, Moray House, 1977:3). This is illustrated in detail from the farming topic and is shown in Appendix 11. In addition to the publications, farming units were included in the BEd courses relating to environmental studies and some of the student teachers were taken on farm visits as part of their field work (personal communication). Other colleges of education also included a farming unit. For example at Craigie College in the late 1980s see Appendix 12.

From these two examples from the colleges of education it can be seen that, as with the education authorities, different approaches are used for farming studies although farming is an element in each course.

Introduction of Environmental Education

During the 1960s-1980s, as noted in the Introduction, there was the rise in public interest in environmental matters and an increasing concern for the conservation of the countryside. It was during this time that Environmental Education began to be introduced into the curriculum.

Definition of Environmental Education – SEEC 1977[12]

'The aim of environmental education is to enable people to recognise the factors which determine the nature and quality of the human environment so that all may respect and appreciate it to the full and participate constructively, as individuals and as citizens, in its management and development.'

For schools this means:

education about the environment (knowledge and understanding)

education in and through the environment (resources, skills and first hand experience)

education for the environment (values, attitudes and positive action)

[12]From Scottish Environmental Education Committee (1977) Scottish Environmental Education Committee (Policy Statement) SEEC Paisley

In the early 1970s, on an international level concern about the environment was growing and, for example, Ministers' Deputies at a Council of Europe meeting in 1971 had passed a resolution (71)14 advocating the principles of nature conservation in education:

> '...the principles of ecology and the various forms of practical application embraced by the term 'nature conservation' must be taught in schools continuously at every level and within various disciplines such as the social, natural and applied sciences...'

Resolution (71) 22 asked governments:

> '...to encourage the training and further training of teachers and officers capable of carrying out action both in and out of school, to organise introductory courses on environmental problems for youth leaders so that they may master the essential facts and compare ideas, and to grant facilities to anyone wishing to take part in such courses in other countries' (SED, 1974:3).

A resolution the following year from United Nations Conference on the Human Environment (Stockholm 1972 Principle 19) stated:

> 'Education in environmental matters for the younger generation, as well as adults, giving due consideration to the underprivileged, is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension...' (*ibid*: para 2.4 :4).

In 1974 the SED published an HMI report on environmental education (known as the Gilbert Report) and the quotation below provides an example of the changes and concerns that were then present.

> 'This awakening regard for our environmental heritage and the growing realisation that the present is the inheritance of the future underline the need both of greater knowledge and understanding of the environment and for more frequent opportunity for emotional and aesthetic response to it. Education, particularly the education of tomorrow's citizens, in matters of such magnitude is essential if responsible attitudes towards the environment are to be created' (*ibid*:para 2.3 :4).

The report was prepared by a working group of HM Inspectorate, with the following remit:

> 'a. to assess the contribution which schools and informal education are making to environmental awareness and conservation;

b. to recommend further ways of focussing attention on the natural and man-made environments in which people live, work and play and suggest ways in which schools might help their pupils to make qualitative assessments of their own and other environments;

c. to relate this to the recommendations contained in Circular No 804;

d to compile a list of agencies whose objectives are to create environmental awareness, a register of some associated curriculum developments already happening in schools, a catalogue of references to 'environment' in Department and official literature and a select bibliography'(*ibid*).

It includes a short history of the development of environmental education and makes reference to the initial importance give to the development of understanding of the countryside, for example, 1964 Circular No550 Appendix 11, stated that

'it must be one of the functions of all outdoor centres to train young people to respect the countryside' (*ibid*:para 2.5:4).

The report records that in 1968 the Committee on Education and the Countryside was set up by the Secretary of State to promote wider understanding and a fuller use of our natural environment.... and promoted a scheme of farm-school linkage. In the same year the Countryside Commission for Scotland was established following the Countryside (Scotland) Act, 1967. The Commission,

'may engage in any activity which they consider appropriate for the purpose of educating and informing people in the proper use of and behavior in the countryside'(*ibid*:5).

It appointed educational staff to undertake a range of activities. The authors of the report noted that

'Liaison was maintained with the Committee on Education and the Countryside and with the Countryside Commission (Scotland)'(*ibid*:5).

The Committee on Education and the Countryside lasted until 1975. In 1977 a new committee was established, the Scottish Environmental Education Committee, which eventually became the Scottish Environmental Education Council (SEEC) in 1984[13] (SEEC, 1985:2).

[13] SEEC effectively ceased to function in 2000 due to funding difficulties.

The report also notes the influence of the Primary Memorandum,

> 'During the last decade the curricula of schools have undergone many changes. Almost all of these changes have provided a more flexible framework within which to plan programmes of work and have enabled teachers particularly interested in environmental topics to explore these outwith as well as within the classroom' (*ibid*:7).

It records that the numbers visiting farms and other sites were gradually increasing.

Reference is made throughout the report to a wide variety of agencies and the use being made of their resources by schools,

> 'Co-operation between individual schools and bodies concerned with aspects of local and national life and environment has introduced many pupils to the objectives of these bodies.' (refers to National Trust for Scotland, Forestry Commission, Nature Conservancy Council, Scottish Wildlife Trust, Royal Sociey for the Protection of Birds, Countryside Commission for Scotland, Scottish Field Studies Association and Scottish Youth Hostels Association - all have facilities available to schools.) (*ibid*:11).

Also,

> 'Schools are taking advantage increasingly of advice and resource material from a variety of bodies with an interest in conservation. Water Boards, River Purification Boards, the Scottish Civic Trust, the Association of Agriculture, the Crofters' Commission and others have co-operated with schools in a variety of ways.....Competitions organised by the Saltire Society, the National Farmers' Union of Scotland, the Milk Marketing Board and at least one Junior Chamber of Commerce have encouraged historical and geographical studies of specific facets of the environment' (*ibid*:11-12).

In 1985 a review of environmental education, Learning for Living, a Review of Environmental Education in Scotland, was published by SEEC and it gave recognition to the importance of the Gilbert Report. This document was recognised as

> 'an important marker of progress, a commitment by the Inspectorate by which it would be difficult to fall back' (SEEC, 1985:1).

However, its recommendations were not followed up by the SED. Reasons for this might include the fact that it was published at the time of local government re-

organisation, other pressure groups such as Education for the Industrial Society were also competing for curriculum time and resources or,

> 'combine these with the innate Scottish caution about meddling with curriculum content and we can probably explain the relegation of the Gilbert Report to "something on which immediate action is not required"'(*ibid*:1).

While there may have been little action taken by the SED, other interest groups took on board some of the recommendations and the SEEC report notes,

> 'It [SEEC] views with satisfaction the growing interest among non-educational organisations concerned with environmental management to provide support for education in various forms, and urges not only that they continue to develop these activities but that they also be given opportunity and support to come closer to the mainstream of formal education where their particular expertise may reinforce the quality of environmental understanding and interpretation' (*ibid*:63).

The educational work of the non-educational organisations continued to grow during the 1980s and 1990s as there was a growing realisation that they could influence the population and gain support for their particular cause through the curriculum.

The form of the curriculum in Scottish primary schools and its variations, as discussed elsewhere in this chapter, provides opportunities for influence at all levels. A factor which is noted in the 1993 review of Environmental Education,

> 'In nursery and primary schools it is relatively easy to enhance environmental perspectives across the curriculum. Subject divisions are not so firm and easier to move, while the thematic approach offers considerable opportunities to use the environment as a resource' (SOEnvD, 1993:53).

This review also echoes earlier reports on the implementation of the Environmental Studies section of the Primary Memorandum,

> 'However, there is evidence that, while many teachers make good use of the environment, others achieve less due to either inadequate planning or through lack of confidence in undertaking work outwith the classroom. This should be addressed by taking advantage of expertise and help from the local community and environmental organisations'(*ibid*).

The report recommends that

> 'Schools and Regional Education Departments need clear and detailed guidance on implementing environmental education so that they can devise effective, locally appropriate strategies for delivery...Guidance should be prepared nationally, and the lead from SOED is vital' (*ibid*).

The expectations were that

> 'the findings of the Review and Development Group 6 (cross-curricular themes) will be valuable an advising how to permeate environmental education through the 5-14 curriculum' (*ibid*:54).

Conclusions

This chapter has demonstrated the increasing role of the Scottish Office Education Department, the Scottish Curriculum Council and the local education authorities in the development of the primary curriculum. It has also demonstrated that there was not always agreement and harmony amongst these groups as each attempted to develop or maintain control.

During this review it became clear that the advice of the main advisory body on the curriculum, the SCCC, was not always taken by the Scottish Education Department but similarly the advice of its own HMIs is not always acted on. This has led to numerous different education initiatives such as PEDP[14] being either shelved or not reaching their potential. However, it appears that schools are well aware of these projects due to the extensive piloting work and local representation on the relevant committees and have taken their recommendations on board.

When advice was accepted by the Scottish Office, local authorities and even the individual schools teachers were often slow in implementing change and the rapidity of the changes in the last few years must have caused confusion and possible resentment amongst the teaching profession.

[14] PEDP – Primary Education Development Project work was superceded by Curriculum and Assessment in the 1990s initiative which resulted in the 5-14 Curriculum Guidelines.

It has been noted that during this period a variety of reports and recommendations on the curriculum have been produced at a national level. These have in turn led to different interpretation at the local education authority level and subsequently by individual schools and colleges of education. In these publications, new terminologies such as concepts and skills were introduced and, through a review of curriculum publications from a variety of sources, the background to the development of the 5-14 Programme has been identified. Throughout the period covered by this chapter, it was the responsibility of schools and individual teachers to choose what would be included (or excluded) from the curriculum. Thus curriculum content varied from school to school, although local education authority advice was often used.

From the foregoing primary and secondary source material, it can be seen that farming and other rural land uses were well established in the primary curriculum. They have been located in environmental studies and education/industry links during the period from the introduction of the Primary Memorandum to the development of the 5-14 Programme.

The flexibility within the Environmental Studies curriculum has provided opportunities for many organisations to attempt to influence both teachers and pupils. This use of outside organisations and their resources together with field work has been actively encouraged in all the main advisory publications. Farming organisations such as the Association of Agriculture and the National Farmers Union of Scotland were amongst the organisations recognised, in both national publications such as Learning for Life and in regional guidance papers including Lothian and Central Region, as having a role to play in the delivery of this aspect of the curriculum.

In this chapter it has been demonstrated that the curriculum is an area where certain groups are able to exert an influence over both its delivery and content. Historically, there are changes between the dynamics of powerful groups, especially as one group

attempts to gain more control over the curriculum than others. The theoretical background to this change in power and control over education and the curriculum is discussed in Chapter Four.

Chapter Four

Farming and the Curriculum: Education and Society, Power and Control

Introduction

In the late 1990s the Countryside Movement announced that it aimed to become a powerful voice for the countryside (Steele 1995). One means by which it intended to do this was by contributing to education about the countryside. In the foregoing three chapters it has been shown that landowners and farmers were once a powerful group in society and, as such, were able to exert control over the education system including the curriculum in Scotland. A decline in the power of landowners and farmers continued as the influence of the industrialists and those living in towns grew. Thus, other groups representing the state, industry and commerce became, and remain, more influential.

Indeed, central to this thesis is the debate over the opportunity and ability of groups, such as the farming and landowning community, to "use" education as the means to retain or increase their influence, power and control. It will be seen that the relationship between power, control and education is the dominant feature of many educational ideologies, for as Mohanty notes

> 'A number of academics... have argued that education represents both a struggle for meaning and a struggle over power relations. Thus education becomes a central terrain where power and politics operate out of the lived culture of individuals and groups situated in asymmetrical social and political positions' (Mohanty, 1997: 558).

Given this background, this chapter will address from a theoretical perspective the key points that have been developed in the previous chapters. This discussion will also identify the historical, social and political background and influences on the contemporary curriculum changes in Scottish primary education. In so doing it will firstly focus on the debate concerning the role of education in society; it will then

turn to the curriculum as a mediator of social change. This will be followed by a discussion about the curriculum as a selection from culture and finally, it will be noted that the curriculum has become central to those who might wish to influence the content and delivery of the curriculum.

Role of education in society

In relatively simple terms the role of education has been described as,

> 'the handing on of ideas of the past, tempered by experience of the present, to men and women of the future' (Hutchinson and Young, 1962:31).

However, as Feinberg and Soltis note,

> 'Schools are a human invention. They have a history. They change forms either in reaction to social forces or because of our conscious attempt to change them. Thus, participants in the schools and in society give schooling a structure; but schools also structure those who work in them and pass through them' (Feinberg and Soltis, 1985:10).

In the previous chapters, the "history" has been examined in relation to the influence exerted by landowners and farmers and it has demonstrated the key role played by this group particularly in early educational developments.

However, it is important to note that theories have been put forward to explain the nature of the political relationship between education and society and to suggest discourses surrounding the type of curriculum most appropriate for a specific society.

There are those educationalists who believe that education is for the good of the individual. For example, Skilbeck (1979), supporting a basic ideology which he called progressivism, noted that it is the individual who benefits from education. Further, through a child-centred approach – representing perhaps a romantic rejection

of traditional values and practices - the transmission of cultural heritage[1] is abandoned in favour of a child discovering, learning and gaining understanding for himself. This ideology is based on the view that human beings are "naturally" good but become corrupted by an evil society. The educational concepts of Pestalozzi, Froebel, Piaget, Dewey and AS Neill are based on progressivism. The latter, Neill, was noted in Chapter One to have found little in favour of the Scottish education system and his methods were in turn criticised by HMIs. Smout (1986) commented on the absence of 'child-centred' education in Scottish education and the control exerted mainly by the Scottish Education Department,

> 'Whereas elsewhere since the 1880s – in Scandinavia, France, America and even England – there had been rapid development in techniques that worked through the psychology of the pupils to develop their personality and capture their interests, the approach in the Scottish classroom remained, at least for most of the first half of the twentieth century, grimly authoritarian and narrow....Above all, at the top, in the SED and in the Scottish training colleges, formalism reigned supreme: the theories of Continental and European reformers were treated with smug indifference, and the ideas of the Scottish educational dissidents AS Neill and RF Mackenzie, though accorded wide respect, were regarded at home either as fads or as subversion. Even the theories of John Dewey, propounded in the United States at the end of the nineteenth century and universally accepted elsewhere, only began systematically to enter Scottish schools in the 1950s'(Smout, 1986:228-9).

Knox concurs with this particularly in relation to the lack of experimentation and he considered (referring to 1945) that

> 'the traditional "sound learning" which characterised Scottish education is not to be despised, but there is a danger of it becoming a closed system' (Knox, 1953:242).

Even though the 'child-centred' approach began to be introduced in Scottish schools particularly after the publication of the Primary Memorandum in 1965 (as noted in

[1] This traditional approach Skilbeck calls classical humanism which is knowledge centred and comes from Plato in the 4th century BC who put forward the idea of a cultural heritage whose custodians were a class of 'guardians'. This idea associates traditional culture and values with a small elite. Thus a classical humanist curricula would concentrate on those kinds of knowledge worked out over centuries to give the best in terms of literature, music and history.

Chapter Three), Smout considers that this dominance of traditional education in Scotland has had a very significant effect on society

> 'Perhaps, then, it is the history of the school more than any other aspect of recent social history that the key lies to some of the more depressing aspects of modern Scotland. If there are in this country too many people who fear what is new, believe the difficult to be impossible, draw back from responsibility, and afford established authority and tradition an exaggerated respect, we can reasonably look for an explanation in the institutions that moulded them' (Smout,1986:229).

This reference to the 'established authority and tradition' relates to the power and control the State currently, and before that the landowners and the church, have exerted over the schools and the education system[2]. The dominance of groups such as these in society has been considered by a significant number of writers including Raymond Williams, who base their views on the political ideology of the Marxist tradition, and who see

> 'social institutions functioning to preserve inequitable class relations in society. They see the school as an instrument of class domination serving to reproduce the workforce and maintain class relationships'(Feinberg and Soltis, 1985:7).

It could be argued that the attitude taken by the landowners and farmers in the 19th century provides evidence to support this;

> 'farmers preferred boys young and men ignorant, for an educated man was discontented, independent and more fond of reading newspapers than of work' (Stewart, 1994:135).

Similarly, although education was becoming a universal right they had little intention that their own families would be sharing the same education for;

> 'It is impossible in this country to ignore the existence of social distinctions and the reluctance which many parents look on any system proposing they associate their children with those beneath them in their station'(Fisher, 1972:70).

[2] This was discussed in Chapters One and Two

As has been noted previously the power of landowners and farmers began to wane as the influence of the industrialists and those living in towns grew. Initially, the countryman provided the food for the townspeople who were totally dependent on them and they were thus in a powerful position in society. However, in Winnifrith's opinion this all changed with the introduction of refrigerated steam ships,

> 'The cities from then on were fed largely from overseas. They ceased to depend on their country cousins. Their population was no longer largely first or second generation up from the country. Above all their sheer size meant that going to the country was almost like going abroad. You went there in a train or later in a bus or in a car. Two nations had been created'(Winnifrith 1969:6).

In addition, it has been acknowledged that the availability of, and the associated legal requirements for, compulsory education, from the late 19th Century onwards, threatened the farmers and landowners position in society. They were concerned that what was being taught was an 'urban curriculum' for as Rider Haggard noted 'the present system is a town system and tends to turn people to the towns'(Rider Haggard, 1902:550).

The education system had also become a State-regulated system and, for some writers (who support the 'critical theory' approach and which again is based on Marxist traditions) it was seen as a force for social control. Indeed, as Barrow and Milburn (1990) argue

> 'the educational system as a powerful force in the control mechanism of the state (thus schools become agents of 'social regulation'). The focus of interest in the management of schools is perpetuation of existing social and economic forms (thus schools are also agents of reproduction). Such reproduction serves to ensure that the 'prevailing' ideology of the state can be conveyed through the school system – a frequently used simile is that of the school as a black box in which equalities in class and gender relationships,

and 'hegemony[3]' of one class over another is replicated. In that process the curriculum in school plays a significant part: academic disciplines within a curriculum far from serving the emancipatory function envisioned in theories of 'liberal education', in fact serve the interests of particular groups and classes within society, because such knowledge, held by some but not others, becomes a form of 'cultural capital'. As a consequence, the cultural forms of working-class or minority groups within schools are systematically devalued' (Barrow and Milburn, 1990:75).

Up until the mid 1980s, Smout's criticism of the Scottish education system would appear to be consistent with these views

> 'In the twentieth century, Scottish education has been marked by the same attitude that branded it in the nineteenth century, which regarded it as a matter of low social priority once the perceived needs of the middle classes had been attended to, and once a channel had been opened for a limited number of working class children to use secondary school and university as a means of upward social mobility'(Smout,1985:223).

For Bourdieu and Passeron (1990) one of the most important functions of an education system is to reproduce the culture of the dominant class, thus helping to ensure its continued dominance. Looking at the contribution made by the education system to the reproduction of the structure of power relationships and symbolic relationships between classes, they were concerned about the distribution of 'cultural capital' and the role of education in this distribution.

Bordieu and Passeron argued that education allocates individuals to a relatively fixed set of positions in sonority. They considered that the success of an education system

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[3] An Italian Marxist, Antonio Gramsci, used the term hegemony in relation the cultural power, authority and control of the ruling classes being imposed on the working class, who he felt were being prevented from thinking for themselves. (Young 1971:28) His concern was also about the role of the intellectuals (and by implication, "their kind of knowledge"). Gramsci argued that

> 'the domination of the capitalist class could not be secured by economic factors alone but required political force and, much more importantly, an ideological apparatus which secured the consent of the dominated classes. In capitalist societies, these apparatuses were effectively the institutions of the civil society (qv.), the churches, the family and even trade unions. Political coercion was essentially a province of the state. The stability of capitalist societies was mostly dependent on the ideological domination of the working class. Gramsci suggested that this domination could not be complete, however, for the working class has a dual consciousness(qv) one part of which is imposed by the capitalist class whilst the other part is a commonsense knowledge (qv) derived from workers everyday experience of the world' (Barrow and Milburn, 1990:188-9).

is largely dictated by the extent to which individuals have absorbed the dominant culture, or how much 'cultural capital' they have. They further demonstrate that 'cultural capital' distinguishes between pupils even with a common curriculum; also the curriculum of the school is not a neutral object - much depends on the child's own cultural capital. Thus it is argued that one of the failures of education is due to the inability of the recipients to gain a full understanding of the knowledge that is offered in the curriculum (Bordieu and Passeron, 1990:71-106).

Apple noted that according to Karl Mannheim, the social reality that schools and other cultural institutions select, preserve and distribute, is a 'social construction' which may not serve the interests of every individual and group in society (Apple, 1979:27). Apple, using the term 'selective tradition' expressed by Williams (1961b) commented that,

> 'within the terms of an effective dominant culture, is always passed on as "the tradition", the significant past. But always the selectivity is the point; the way in which from a whole possible area of past and present, certain meanings and practices are chosen for emphasis, certain other meanings and practices are neglected or excluded. Even more crucially, some of these meanings are reinterpreted, diluted, or put into forms which support or at least do not contradict other elements within the effective dominant culture' (Apple, 1979:6).

However, he observes that,

> 'the general principal of the social construction of reality does not explain why certain social and cultural meanings and not others are distributed through schools; nor does it explain how the control of knowledge preserving and producing institutions may be linked to the ideological dominance of powerful groups in a social collectivity' (*ibid*).

There were, however, references made in Chapters One and Two to the benefits of education on society as a whole and to individuals, for example the earlier work of Robert Owen, the actions of the Duchess of Sutherland and by others, such as Patrick Geddes, who recognised the contribution that the countryside could make to the

overall education of pupils whether from the country or the city. There are similarly educationalists who base their views on educational ideologies that are considered to be society centred and which 'see education as a way of improving society, and at the same time developing individual members of a society' (Lawton,1989:6). Skilbeck (1979) refers to this as 'reconstructionism' and Lawton supports this approach as he considers that it preserves the best from classical humanism and progressivism and develops a new ideology. He rejected progressivism partly because he thinks that it is overly optimistic but partly because 'it fails to relate curriculum to society and the educational needs of individuals growing up in that society'. His view is that the reconstructionist curriculum

> 'does not only benefit individuals but also improves a society which is capable of development. A reconstructionist curriculum will be a common or a national curriculum, but not a uniform curriculum, the details of which will be open to debate and will change from time to time' (Lawton, 1989:8).

The reconstructionist curriculum advocated by Lawton lays stress upon social values, experiences appropriate for developing citizenship and social co-operation although he notes that

> 'Knowledge is by no means ignored, but knowledge for its own sake is questionable. Knowledge is justified in terms of social need, not in terms of custom, nor cultural heritage, per se. Subjects will not be taken for granted, and various patterns of integrated studies may tend to assume more importance than subject components. Science and mathematics will be taught to all pupils, not only because they are useful for vocational preparation, but because they are important for an understanding of the society and the physical environment' (*ibid*:6).

However, the view held by Lawton that the curriculum (in England and Wales) is a democratic, non-Utopian version of social reconstructionism is said to be flawed because in a democratic society there are still many undemocratic features. Whitty(1993) in his critique of some recent British orthodoxies disagrees with Lawton's basic curriculum concept.

> 'I would argue that his (*Lawton's*) proposals derive from a misrecognition of the social formation in which they have arisen and that they may effectively contribute to the construction of the sort of new hegemonic discourse about education which could help bolster a society hostile in nature to one in which his concept of social justice could have any real substance'(Whitty, 1993:50).

The Curriculum as a reflection of social change

In the foregoing paragraphs the curriculum has been identified as a key area of debate. However, as has been demonstrated in Chapters Two and Three, it has been subject to change over time and these changes would appear to be related to both economic and social pressures. Young, referring to the work of Williams (1961b), suggested that curricula changes

> 'have reflected the relative powers of different groups over the previous 100 years' (Young (ed), 1971:29).

These are shown in Table 4.1.

Table 4.1 Curriculum changes as a reflection of power

Ideology	Social position	Educational policies
1. Liberal/conservative	Aristocracy/gentry	Non-vocational – the 'educated' man, an emphasis on character
2. Bourgeois	Merchant and professional classes	Higher vocational and professional courses. Education an access to desired positions
3. Democratic	Radical reformers	Expansionist –'education for all'
4. Populist/proletarian	Working classes/subordinate groups	Student relevance, choice, participation

(Source : Young (ed), 1971:29)

The first ideology of the liberal/conservative man identifies the time when those with agricultural interests were able to exert the most power and which was demonstrated

in Chapter One. This approach also exemplifies how this position of power has changed from predominantly rural to a majority urban population.

While William's approach was commended by Young, he noted that

> 'there were deficiencies in his hypothesis such as the lack of attention paid to the changing power relationships between the groups which might account for curricula changes' (*ibid*).

It could also be said, particularly in Scotland and from the evidence given in Chapter One, that he has failed to note the power of the established church at the time when the aristocracy/gentry were able to influence curriculum change.

Williams also believed that the problems of the education system have been caused by the inability of the system to adjust to change,

> 'An educational curriculum, as we have seen again and again in past periods, expresses a compromise between an inherited selection of interests and an emphasis on new interests. At vary points in history even this compromise may be long delayed, and it will often be muddled. The fact about our present curriculum is that it was essentially created by the nineteenth century, following eighteenth-century models, and retaining elements of the medieval curriculum near its centre'(Williams, 1961b:151).

In Chapters Two and Three it was demonstrated that the content of the curriculum changed only slowly until 1965 even though the shift in power had been from the landowners to the state.

Thus according to Williams the curriculum represented a compromise, inferring that all parties were in at least partial agreement. Williams, writing just prior to the publication of the Primary Memorandum (and the Plowden Report for England and Wales), considered that the education system, curriculum content and teaching methods were all in need of reform as they represented a class-based educational organisation and divisive curricula which were inherited from the class-dominated nineteenth century. He suggested (Williams, 1961b) a reformed curriculum based on

his historical analysis of our culture and that for a truly democratic society there should be common schools with a reformed common curriculum.

This view that the curriculum represented a compromise is also shared by Richmond but he believes that it is academic opinion that is the reason for the slow change in the education system and the curriculum as he notes,

> 'Yet so strong is the inertia of tradition that it seems probable that academic opinion in this country (more so in Scotland than in England) still favours a humanistic type of culture, albeit with a growing admixture of science. " By the middle of the twentieth century", thinks one prophet[4], "tradition was over-valued, continuity too much revered. For every change there had to be a precedent. Britain, in other words, remained rural-minded long after eighty percent of its population were collected together in towns – altogether as strange an example of cultural lag on a mass scale as China before the Mao Dynasty"'(Richmond, 1964:9).

However, this "rural mindedness" is often based on what is perceived as the "rural idyll" and one may suggest that this public perception of the countryside and those who work and live there has changed little over the last hundred years. This is supported by Allaby who noted that,

> 'There is a popular romantic image of country life and country people that is difficult to dislodge, partly because there are places that still correspond to the ideal – although they are likely to be rather crowded – and partly because the ideal is so obviously *right* (his italics), it is what the countryside ought to be, all fresh eggs and butter and homemade wholemeal bread, eaten amid green meadows and buttercups, with oak and hawthorn and a crystal clear brook babbling in the background. The truth is very different'(Allaby, 1971:143).

Further, the reluctance of Scottish teachers to incorporate change was demonstrated when the success of the Primary Memorandum was discussed in Chapter Three. It was noted by COPE in 1983 that many teachers, while aware of the report, did not appreciate its contents. Further Adams (1997) commented that many teachers were

[4] Michael Young, The Rise of Meritocracy, p27

unsure of how to integrate the new subject areas and that the child-centred approach was not totally accepted.

However, in Britain during the latter half of the 20th Century there has been an unprecedented interest in education by the successive governments. This interest has led to a number of important educational changes, particularly in relation to the curriculum and its content[5]. Lawton (1980), who favoured the development of a common curriculum, considered that there should be some control over curriculum changes and

> 'it is also important that the machinery for curriculum development and change should be appropriately controlled, and that this shared control can be seen to be fair and appropriate by all those who have a legitimate interest in it. Occasional disputes about the control of the curriculum are probably inevitable; but it is time for the rules of the game to be made public'(Lawton, 1980:139).

However, there are those who see the arguments for a common curriculum as

> 'a hegemonic device to ensure the political and economic survival of either the ruling elite, or a ruling cultural group (to the disadvantage of other groups within the same society), or as a means of enshrining in the schools a particular philosophy of education (that excludes individualistic or experiential conceptions of how the curriculum ought to be organised and implemented)' (Barrow and Milburn, 1986:65).

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[5] Curriculum content

The above discussion has focused on the theoretical background to curriculum and content. However, others have used different approaches. Indeed, it has been defined by many authors from Bobbitt (1924) who, using a mechanistic approach, divided the curriculum into a series of activities - 20,000-30,000 specific mechanical skills, through to those who define the curriculum as the essential means of education, 'it is everything that the students do'.(Bobbitt in Lawton 1989:11)

Others have suggested that the curriculum can be divided into three types - subject, core and activity. Core curriculum is not considered as a group of subjects for study by all pupils but 'an arrangement of subject matter according to a set of principles. (Richmond 1971:4-5) However, Richmond considered that as only a fraction of the total accumulated experience can be included in a programme of formal education and it is for the curriculum worker to select the content.

Britain was, however, not unique in incorporating educational change and Morrell (1994) posed the question,

> ' Why educators in all parts of the world are finding it necessary to organise a response to change on a scale, and in a manner, which has no precedent... Why can't curriculum modification follow the simpler pattern of spatial and piecemeal change which we and other countries followed for so long?'(Morrell in Pring, 1994:7).

Indeed, others have suggested that there are many reasons but that these in fact stem from the pace of change in modern society.

> 'Its rapidity, and the extraordinary difficulty we face in defining its characteristics, and in communicating the implications of change throughout complex systems of human relationships, have destroyed or at least weakened the broad consensus on aims and methods which was taken for granted when our present system took its present form' (*ibid*).

It is important therefore to consider the impact of these more recent changes which, for some, have created a crisis of values and an appraisal of the old accepted order,

> 'about the kind of knowledge which is worth teaching, the literature worth reading, the values worth pursuing, the gaps between liberal education and vocational training worth bridging'(*ibid*).

Morrell refers to a return to the worst sort of conservatism which Pring interprets as meaning

> 'harking back to the days gone by when consensus reigned – at least amongst those who had the power to impose their view of things upon the rest'(*ibid*).

However, for any educational change to be successful it has been suggested that two components are necessarily involved: a theory of education relating to what should change, and a theory of change concerning how to bring about change (Fullan 1991).

> 'The problem of meaning is central to making senses of educational change. In order to achieve greater meaning, we must come to understand both the

small and the big pictures. The small picture concerns the subjective meaning or lack of meaning to individuals at all levels of the educational system. Neglect of the phenomenology of change – that is, how people actually experience change as distinct from how it might change – is at the heart of the spectacular lack of success of most social reforms' (Fullan, 1991:4).

Further, Fullan suggests that there are three broad phases involved in the implementation of any new programmes or policy and, together they represent the means of achieving a particular educational goal or set of goals.

These are:

- Phase One - variously labelled initiation, mobilization, or adoption – consists of the process that leads up to and includes a decision to adopt or proceed with change.
- Phase Two – implementation or initial use … involves the first experiences of attempting to put an idea or reform into practice.
- Phase Three – called continuation, incorporation, routinization or institutionalization - refers to whether the change gets built in as an ongoing part of the system or disappears by way of a decision to discard or through attrition (Fullan, 1991:48).

In England and Wales, following the new legislation of the Education Reform Act 1988, a new National Curriculum was introduced. One of the reasons given for introducing this was that common schools should transmit a common culture by means of a common curriculum (Lawton, 1989). In Scotland no national curriculum was introduced, instead curriculum guidelines were issued by the Scottish Office, each local authority was invited by the Secretary of State to incorporate them in the curriculum of the schools. The differences in approach were identified by Rand (1990) who noted that,

> '…in 1975 curriculum development north of the border was centrally controlled and managed: I thought it staid, conservative and unresponsive.... Since the 1960s, curriculum design and development in England and Wales have tended to operate through a devolved structure where considerable emphasis has been placed on the professional autonomy of teachers. By contrast, in Scotland the curriculum has been tightly controlled and managed

> at the centre. However, in 1990 teachers working south of the border find that a National Curriculum and key stage testing have reduced their own autonomy, whilst their colleagues in Scotland find that they are operating within less restrictive guidelines. The more liberal professional framework appears also to have been more vulnerable to political intervention'(Rand, 1990:150).

However, evidence given in Chapter Three does not totally support this view and it suggests that local educational authorities and schools were active in curriculum development prior to the changes which took place in 1990. The impact and effect of these changes will be investigated further in Chapters Five and Seven.

The Curriculum as a selection from culture

In the foregoing paragraphs the discussion has focused on the ideologies which have been considered as the basis for the education system and the curriculum and thus the types of curriculum in place in society. Frequent reference has been made to the culture of the society and the curriculum as a selection from culture for, as many authors including Hooper(1971) and Williams (1961) have agreed, the curriculum

> 'is socially and historically located, and culturally determined. Curriculum does not develop in a vacuum but proceeds on the basis of beliefs - seldom made explicit - about how people learn, what human beings should be like, what society is'(Hooper, 1971:2).

The key concern which has been developed has focused upon the way in which certain vested interests may come to exert authority, even power over curriculum planning, design and construction. Further, it is suggested by Apple,[6] that if "knowledge" is "control", it is those in positions to influence the content of a nation's curriculum who come to have considerable power, power which is not necessarily controlled by the politicians or state (Apple 1993). It has also been argued that an examination of what is selected from which culture provides an indication of the

[6]Apple writes from a neo-marxist cultural position, as noted in a biographical interview recorded in Official Knowledge: Democratic Education in a Conservative Age , Apple 1993:179

power relations in society. 'Culture' as an analytical concept as well as a form of social relations becomes important. Indeed, it centrality in the discourse about farming in education, in schooling and in the curriculum can be seen to be historically contextualised.

At this point it is important to discuss what this concept has come to mean. However, the definition of 'culture' is itself complex, partly because it has changed over time and partly because it has different meanings for different groups within any society.

For many years culture has been an intensely contested concept and it has been demonstrated by Williams (1961) that the meaning of the word 'culture' has also changed over time. He noted that prior to the 19th Century culture meant

> 'tending to natural growth and by analogy, a process of human training' (Williams, 1961a:16).

The 19th Century first saw the word used as a thing in itself -a culture, and it came to mean

> 'a general state or habit of mind having close relations with the idea of human perfection' (*ibid*).

Later in the 19th Century, Williams contended, culture came to mean

> 'the general state of intellectual development, in a society as a whole, following which it came to mean 'the general body of arts' and finally in the same century as 'a whole way of life, material, intellectual and spiritual' (*ibid*).

He considered that these changes of meaning were

> 'a record of a number of important and continuing reactions to these changes in our social, economic and political life' (*ibid*).

Indeed, this last definition has been used with some modifications by writers during the 20th Century. For example, Linton (1940) defined culture as

> ' a sum total of knowledge, attitudes and habitual behaviour patterns shared and transmitted by members of a particular society' (Lawton, 1988:17).

Lawton (1988) elaborates this to include everything that is created by human beings - the whole way of life of a society. However, many authors have contrasted this view of culture, the totality of knowledge, attitudes and behaviour, with a more elitist approach. This alternative concept of culture can be expressed as 'the best that has been thought and said', a high or elitist culture.

Significantly, for this work, writers on culture have often made reference to the different cultures that have evolved in the countryside and the town. They consider that the root of our culture originated in the countryside and that through progressive urbanisation this culture has been lost to the people in the towns. What remains, as noted earlier in this chapter, is often a romantic image, the so-called 'rural idyll'. This is demonstrated by Bantock who considered that

> 'the working class no longer has such culture. Once, in pre-industrial England they did; and our lives have been permanently enriched by the craftsmen, the songs and legends of the oral folk tradition...industrialisation has reduced the range and scope of their work, sometimes catastrophically, and their culture has suffered accordingly' (Bantock, 1975:153).

This notion of a lost culture has been further reinforced by classical literature but, as Leavis and Thompson (1933) stressed,

> 'what we have lost is the organic community with the living culture it embodied. Folk songs, folk dances, Cotswold cottages and handicraft products are signs and expressions of something more: an art of life, a way of living, ordered and patterned, involving social arts, codes of intercourse and responsive adjustment, growing out of immemorial experience, to the natural environment and the rhythm of the year' (Leavis and Thompson, 1933:87).

Interestingly, they consider that what was left of the old order of the rural way of life has slowly been destroyed and that education has, in part, been responsible for this destruction. However, Eagleton suggest that the only sure fact about the "organic society" or community is that it has always gone,

> 'Organic communities are just convenient myths for belabouring the mechanized life of modern industrial Capitalism' (Eagleton, 1990:36).

But, as Williams points out,

> 'Rural Britain was subsidiary, and knew that it was subsidiary, from the late nineteenth century. But so much of the country, its feelings and its literature, was involved with rural experience, and so many of its ideas of how to live well, from the style of the country-house to the simplicity of the cottage, persisted and even were strengthened, that there is almost an inverse proportion, in the twentieth century, between the relevant importance of the working rural economy and the cultural importance of rural ideas' (Williams, 1973:248).

The dominant culture in modern Western societies has tended to support the norms, values and beliefs of the urban middle class who, incidentally, may be a numerical minority. It has been argued that the school system should reflect this. As Barrow and Milburn (1990) note

> 'the role of the national system of schooling should be to preserve and continually reforge the dominant culture, precisely because it is a national system and not, for example, a working class, Inuit or Asian system'(Barrow and Milburn, 1990 :82).

In order to establish what are regarded as the 'most valuable aspects of culture' which should be included in a 'common curriculum', Lawton suggests that a form of cultural analysis should be used which involves defining the kind of society which already exists, the ways in which this society is developing, the ways in which its

members appear to want it to develop, the values and principles involved in this development and the educational means available to achieve the changes.

> 'A selection from culture is thus made by analysing society', Lawton states, 'and mapping out the kind of knowledge and experiences that are most appropriate for the development of society' (Lawton, 1988:19).

This is an interesting approach. In Chapters Two and Three the development in one curriculum area of one particular subject, farming, has been traced and its social and historical roots identified; from the inclusion of the subject in rural schools to its place in Nature Knowledge and Environmental Studies in all schools. With the curriculum changes which took place in the 1990s, and given the views expressed above by Lawton and Williams, it is relevant to question whether there remains a role for farming in the new curriculum and whether the landowning and farming community have been able to influence the developments at any stage.

Influencing curriculum and curriculum content

In the foregoing it has been suggested that those at the centre of power, mainly the government of the day, have been able to impose a curriculum and curriculum changes. However, since the 1960s particularly with the emphasis given to resource materials, other groups have been able to make significant contributions to curriculum content and development. This has led to market-driven educational policies where commercialism has become an accepted element and where the resources used to deliver the curriculum become a vitally important element for the knowledge that they transmit and the very fact that they are provider-led rather than teacher led. This factor is of particular significance, as it has been indicated (in Chapter Three), there are many competing resource providers including those with interests in farming and the countryside.

Text books are an example where specific groups can have a significant impact. Indeed, it has been argued that, for example, in the USA publishers will only produce text books which sell well in some of the largest states, for example, Texas and California,

> 'the perspectives on history that the vast majority of students will receive will be a narrative of relatively self-congratulatory progress seen largely through the eyes of dominant groups' (Apple, 1993a:313).

In his conclusion to this Apple notes that,

> 'Ignoring the complex relations between cultural capital and economic capital will not make the situation any easier. The world may be text, but some groups seem to be able to write their lines on our lives more easily than others'(*ibid*:315).

This factor is particularly significant in Scotland where the school publications market is relatively small. Commercial publishing companies may not wish to produce materials for this market, interest groups do not have to be so commercially orientated as they often have only limited resources and a smaller market is better suited to them.

Since the 1970s there has been a rapid increase in the number and variety of 'educational packs' and 'educational projects. Commercial publishers, large industrial companies such as BP and Shell and interest groups have all taken advantage of this route to get their products (and their beliefs and opinions) into the schools.

> 'Many manufacturers are waking up to the fact that getting their name, logos, products placed within a school environment has the potential to increase sales, even for products and services that children would not necessarily consider purchasing for themselves' (Consumers Association, 1997:6).

Indeed, it would appear that each new curriculum change has produced a vast amount of new teaching materials. How teachers assess and select the material that they will use will be influenced by school policy and their own preferences. At the primary school level, in Scotland there are no nationally set texts although suggestions and resource lists are available.

More and more concern has been expressed regarding the potential bias and marketing strategies of resources mainly produced by industry. In an article in the Times Educational Supplement Scotland (TESS December 1995) the need for an accreditation scheme for these type of resources was discussed. Alarm had been raised over the obvious advertising and propaganda that certain groups were incorporating in their educational material. The question was asked, 'is it asking a lot of teachers that they should be able to detect bias and advertising materials?'(*ibid*) particularly when they are so under-funded and free materials are attractive. Specialist companies, often formed by ex-teachers have been established to produce materials for industry and other groups. One company, the article notes says that its projects will,

> 'pinpoint relevant age groups and build awareness of your brand' and extend the reach of your companies communications message' (TESS, 1995).

The companies argue that the publications have a unique role

> ' They bring education closer to reflecting the real world and are a way of bringing new ideas, applications and developments into the classroom quickly'(*ibid*).

Others give alternative reasons.

> 'they want to educate the future work force, market their product and work with the community'(*ibid*).

Guidelines on the production of resources had been published by the National Consumers Council in 1988 but, according to the TESS article, had proved to be relatively ineffective. In 1996 new guidelines, Sponsorship in School: Good Practice, were produced by the Consumers Association. Copies of the Guidelines had been distributed to every school in England, Wales, Scotland and Northern Ireland, also to Local Education Authorities, Parent Teachers Associations, Governing bodies and to companies involved in the production of educational material. By 1997, in a review of these guidelines, the Consumers Association admitted that,

> 'it was impossible to assess how many schools had seen the guidelines or tried to make use of them...There was little evidence to show how many companies had received the guidelines or if they were trying to comply with suggested good practice. Finally, little had been done to establish if a system of accreditation could or would work' (Consumers Association, 1997:7).

It has been seen that for a curriculum area to develop, certain knowledge-bases need to be enhanced. The mass media particularly television is another means of influencing the curriculum. In Britain all the major channels produce programmes for schools often together with texts and teachers guidance. But this is not the only way of influencing potential consumers. In the USA a TV company, Channel One provides equipment in return for the school signing a contract for 3-5 years that states 90% of all students will watch the broadcast 90% of the time. At a time when school funds are severely restricted this is a very tempting offer and Apple comments,

> 'schools throughout the nation have seen Channel One as a way of teaching "important knowledge" and as helping to solve their budget problems. Their "common sense" will be formed through this media'(Apple, 1993:314).

The influence that television and other "culture industries" have on our understanding of the world and on the transmission of culture should not be underestimated. Indeed, the media has played an important role in the shaping the public perception of the countryside and farming activities and it may be said that the influence of the media on perpetuating this 'romantic' image has been profound. For

example, the radio programme, 'The Archers' provides an insight, perhaps the only insight, into country life for millions of listeners. The enduring nature of this long running series could be attributed to this image and is exemplified by Painting (the actor who plays Phil Archer) when he refers to the beginning of the series,

> 'it was into this post-war world of shabbiness and shortages that The Archers entered, bringing with it a glimpse of the way of life that, although subject to the same shortages, the same restrictions and the same frustrations, seemed less daunting and more coloured with hope. The sun shone brighter there, the grass was greener' (Painting,1975:13).

Other forms of the media - books, magazines and consumer programmes also combine to recreate this nostalgic view of the countryside – the 'rural idyll'. Indeed, those involved with the countryside, the landowners and farmers, have been known to exploit (and perpetuate) this image with farm attractions and agricultural museums promoting the old fashioned images of farming (Morris, 1989). It should be noted that these too are often used as an educational resource.

However, while this romantic image of the countryside may remain, the public perception of those who work in the countryside is often less flattering. During the first half of the century and particularly during the two World Wars public opinion was in general favourable towards farmers and landowners. By 1969 Winnifrith, who was at one-time the Permanent Secretary, at the Ministry of Agriculture, Fisheries and Food, presented his caricature of a farmer,

> 'First of all he is beastly rich – two Bently Standard at least. He makes his vast wealth by battening on the tax payer's money – feather-bedded in subsidies. In his greed for more and more money he poisons with his beastly chemicals every living thing on his farm that competes with his husbandry. Given a chance he will poison the whole environment and eliminate the human race as well. On top of that he tortures his own livestock with infamous treatment, all to increase his profits...In fact he is the bottom – an antisocial parasite living on the rest of the nation and giving nothing in return'(Winnifrith, 1969:5).

Although Winnifrith was commenting on the image of farmers, public opinion regarding farming methods was also changing and, according to Skerratt (1995), the publication of Carson's book, Silent Spring[7] in 1963 marked the change in attitudes to farming as people became more concerned about chemical inputs, farming methods and conserving and protecting the countryside. The 1960s and 70s also saw the rise of the environmental movement with, for example, the establishment of organisations such as Friends of the Earth, and these organisations played a major contributory factor in raising the public's concern over farming methods.

This public interest in farming methods continued, with Soper and Carter (1985) noting that the 1980s was a time of unprecedented public interest in the countryside and the questioning of the methods used by farmers in the production of food. As Evans (1992) commented on the public outcry over the loss of wildlife habitats through intensive farming methods

> 'the politicians began to listen and the farmers came to realise that their thirty-five years in clover were coming to an end' (Evans, 1992 in Skerratt, 1995:11).

Indeed, Eagleton considers that

> 'Discourses, sign systems and signifying practices of all kinds, from film and television to fiction and the languages of natural science, produce effects,

[7] 'Silent Spring' was an influential publication which focused on farming methods in particular the use of agrochemicals and the potential damage that they could cause.

> shape forms of consciousness and unconsciousness, which are closely related to the maintenance or transformation of our existing systems of power' (Eagleton, 1990:210).

Even from the time when television was first used in schools commentators have expressed concerns about the information that is broadcast,

> 'The effect of the media is to atrophy rather than debase culture. There is also the encouraging fact that there is a minority of media that strives unceasingly to raise our cultural standards. Our culture is compounded of a unique mixture of Christian and rationalist traditions, the 'Hebraic and the Hellenistic' of Matthew Arnold. Both are necessary for our cultivation and both are now engaged in the process of re-interpretation. On more than one occasion in the past the uniqueness of the two traditions has surprised our friends, bewildered our opponents, and astonished ourselves. Both are now challenged by the barbarianism of an unadulterated technology' (Hutchinson and Young, 1962:31).

By the very fact that curriculum content is made by 'interest ' groups, it has been argued by many authors, including Apple (1993) that the final selection will never be value free. In addition to this, the views held by those who have the final responsibility for passing on this knowledge, the teachers in the classroom, are of equal importance and even Lawton accepts that

> 'every statement a teacher makes in the classroom is value–laden, connected with ideas about the purpose of education, probably connected with the more general values and beliefs, and maybe with the purpose of life'(Lawton, 1988:3).

Conclusion

In the foregoing it has been argued that those in a position of power are able to influence the education system, the curriculum and the specific selection from knowledge that makes up the curriculum. It has also been noted that it is not only the State that is able to exert influence over the curriculum. Other influential groups, including at one time landowners and farmers, have been able to exert some forms of control over the curriculum but power relationships have changed as society itself has changed. Using the historical source material included in the first three chapters of

this work, it appears that there is evidence to support the theoretical approaches of Williams and Apple.

However, it has been seen that in the last quarter of the 20th Century there had been considerable interest in education and curriculum by political parties and other socially, politically and economically powerful groups. No longer are farmers and landowners key groups in the delineation and communication of curriculum knowledge. Major reforms, notably in Scotland, the 5-14 Programme have resulted in many opportunities for varied cultural and social groupings to influence the curriculum. This will be the focus of Chapter Five. This thesis will further examine whether powerful groups representing specific interests, (whether from farming interests, government agencies or groups with environmental interests) have attempted to influence the curriculum at a national strategic and policy level during the most recent curriculum changes.

Chapter Five

Curriculum and Assessment in Scotland National Guidelines 5-14: the location of farming in the new curriculum

Introduction

It has been seen that the curricula of schools contains highly contested and even ideological material. In the previous chapters such contestation was related to the demise of one set of powerful interest groups (farmers and landowners) and the rise of others (environmental pressure groups). Following the theoretical discussion regarding the importance of the curriculum as a selection of knowledge and related to the power relations in society, this chapter demonstrates the manner in which the State, through the Scottish Office, has acted to regain power and control over the Scottish Primary curriculum. From a detailed analysis of contemporary curriculum documents, specifically in relation to the inclusion of farming, it will be seen that the new form and content of the curriculum also provides opportunities for other groups seeking to influence the school population. This is on a scale not previously available. Further, it will be shown that, certainly in the case of farming, this has been made possible because the curriculum is not fully prescriptive. Therefore, especially in the 5-14 curriculum, it allows resource providers to indicate the precise location where their resources might be utilised in the curriculum of every primary school.

As noted in Chapter Three major changes in the Scottish primary curriculum took place as a consequence of the review initiated in 1987 by the Scottish Office. The main outcome from this review was the 5-14 Development Programme which resulted in a set of documents published during the first half of the 1990s, under the title Curriculum and Assessment in Scotland National Guidelines[1].

[1] The Scottish Office Education Department, Curriculum and Assessment in Scotland National Guidelines 5-14, 1991-93. It is more usually called the 5-14 Curriculum,5-14 Guidelines or 5-14 Programme.

In the previous Chapters it has been noted that farming has been located within Environmental Studies and it is for this reason particular reference is made to the Environmental Studies guidelines. This chapter outlines the background to the review, the processes involved prior to the introduction of this Programme and the content and form of the guidelines, specifically Environmental Studies.

In addition to the Scottish Office publications, reference will also be made to comments and actions taken by a number of local education authorities to implement the curriculum changes. This provides the evidence to show that a variety of different approaches are still possible. Evidence will also be provided from local authorities and individual schools on the use of farm studies and their place in the curriculum.

In the Chapter 3 it was noted that there was an increase in the use of resources from organisations and companies and this was actively encouraged by educational advisers. In this chapter it will be demonstrated that this use of resources not only continues to be encouraged, it is also promoted at a national level by the SCCC.

It has been noted previously that a number of different agencies, including SCCC, were undertaking work to assist with the implementation of the curriculum. Their role in implementing the 5-14 Programmme is demonstrated, particularly in relation to environmental organisations. Through this analysis, it is possible to identify the key organisations that are playing a major role in influencing the content of the 5-14 Curriculum and the means by which they are attempting to do this.

This Chapter also provides an insight into how the farming is being incorporated into the new curriculum by both local authorities and individual schools. It demonstrates that it remains as part of the 'selective tradition' which is incorporated into a curriculum but

the form of the curriculum in each individual school is also based on selection. Other options are also available for selection for, as it is noted in the Introduction to the Environmental Studies Guidelines, 'The guidelines do not prescribe any single approach to planning and delivering Environmental Studies and there are many valid and effective ways of approaching these tasks' (SOED, 1993:ix).

Background to the 5-14 Development Programme

In November 1987, the Secretary of State for Scotland published a consultation paper, Curriculum and Assessment in Scotland: A Policy for the 90s. In Chapter 3 reference is made to the publication of this consultation paper which appeared to be in direct response to an earlier document published by the SCCC. Humes commented that '5-14 was clearly political and was introduced quite deliberately to stop another professionally led initiative,10-14'[2] (Humes, 1999:78) However, the background to the introduction of the 5-14 Curriculum indicates that while it was politically motivated, it was far more complex than just the Scottish Office and the SCCC vying for position and it affected, not just Scotland, but the whole of the British education system. In England and Wales, the consequences of this political intervention was a new statutory National Curriculum[3] for 5-16 year olds, introduced into schools following the Education Reform Act of 1988.

Political interest in the control of the curriculum had begun at least 20 years earlier. Lawton records the concern of a Conservative Minister of Education to 'the secret garden of the curriculum' an area which, to the Minister, appeared to be closed to open discussion (Lawton, 1989:36).

[2] Education 10-14 programme, SCCC
[3] The National Curriculum, England, Department For Education and Science, HMSO

This concern led to the establishment of a curriculum review group and, subsequently to the Schools Council for Curriculum and Examinations (in England and Wales).

Consecutive governments continued to show an active interest in curriculum content and the 'Great Debate on Education' which was initiated by James Callaghan, Labour Prime Minister in 1976 contained some reference to the curriculum. The subsequent Conservative government continued to take an active interest in the curriculum through the publication of a number of papers from the Department of Education and Science. According to Lawton, by the mid-1980s, the curriculum had become a party political issue,

> 'The politicians wanted to control the curriculum, partly because some aspects of the curriculum content were seen to be causing political concern' (Lawton, 1989:38).

In 1987 a national core curriculum was contained within the Conservative party manifesto and subsequently, provision for a National Curriculum was contained within the Education Reform Act 1988.

Lawton considered that it became inevitable that a National Curriculum would one day be introduced into schools, whichever political party was in power. The reasons for this he believes were the result of both political and social pressure. He identified these pressures as:

- 'Consumerism in education, and in particular the desire of parents to be well-informed and possibly be involved in some aspects of curriculum decision making.
- Pressure from the DES[4] to control education (as well as to resource it) and to run an efficient value-for-money system.
- The curriculum became a (party) political concern for at least three reasons – populist appeal, a genuine concern to raise standards, and the realisation that

[4] DES – Department of Education and Science (England and Wales)

> the curriculum was potentially 'political' and might need to be controlled (especially when in the wrong LEA hands)'(Lawton, 1989:41-42).

These same pressures may well have been present in Scotland but the outcome was not that of a statutory National Curriculum, rather a set of curriculum guidelines which the Secretary of State for Education, 'commends the guidelines and invites education authorities and schools to incorporate them as soon as possible' in their teaching (SED, 1993:iii).

Considerable debate has focused on the reasons behind these differences and the control and influence exerted by the then Secretary of State for Education, Michael Forsyth. Pickard (1999) questions how much the new Scottish curriculum reflected the Conservatives Government's education strategy and how far the

> 'new intervention stemmed from Scottish conditions – including minister's resentment at teachers autonomy and the power of the education authorities'(Pickard, 1999:231).

He notes that

> 'On the one hand it was argued that Forsyth was in thrall to the forces which produced a statutory national curriculum south of the border through Education Secretary Kenneth Baker's Education Reform Bill, which passed through parliament in 1988. On the other hand there was no attempt to base the 5-14 programme (as the new curriculum came to be called) on statute or prescribe, for example, texts suitable for seven year olds or episodes of glorious history to be studied, as Thatcher insisted in England and Wales'(*ibid*).

Michael Forsyth, according to Humes,

> 'took a keen interest in the details of recommendations for particular curricular subjects, demanding changes and setting out his views in robust terms'(Humes, 1999:77).

This is clearly shown in his foreword to the Environmental Studies Working Paper No 13 (SED, 1991) in which he puts forward his views on a subject based curriculum,

'...I would, however, have welcomed a stronger recognition in the report that individual subject areas such as history and geography will, and indeed should, figure distinctively in the pupils' experience in the later stages of primary schools leading on to similar subject-based studies in S1 and S2' (SED, 1991:i).

The foreword concludes with

'I believe that the draft guidance in this Working Paper could be made a more sharply focused and a more practical tool for teachers if it were developed this way' (*ibid*).

As with previous curricula reforms, working groups were established to produce the new curriculum but due to the strong managerial style of Forsyth, they were given narrow remits, tight time-scales and an emphasis on accountability and delivery (Gatherer 1999). The final 5-14 curriculum has thus been described as a

'totalitarian curriculum indicative of the new authoritarianism in Scottish education' (Gatherer,1999:77).

This is reflected in the perception that

'there has been a failure to trust teachers in the development of too many detailed competing demands and as a result teachers feel overwhelmed, deskilled and the objects of top-down policy directives' (Kiddie, 1993:3).

However, according to the Scottish Office Education Department

'The 5-14 guidelines[5] are about improving the quality of education in Scottish schools by clarifying

- the aims of the curriculum,
- how pupils' progress should be assessed, and
- the information to be provided for parents'

and 'They are founded on good practice already evident in schools'
(HM Inspector of Schools, 1994).

[5] The final set of guidelines, published individually at differing times were as follows:
English Language, Mathematics, Environmental Studies, Expressive Arts, Religious and Moral Education, Personal and Social Development, Gaelic, Latin, Modern European Languages, Assessment, Framework for National Testing, Reporting and Structure and Balance of the Curriculum.

The new curriculum was based on a set of five principles namely: breadth, balance, coherence, continuity and progression (SOED, 1993:6). These terms can be explained as follows:

> Breadth – a wide range of areas of learning
> Balance – enough time for each area of learning
> Coherence and Continuity – the bits of learning fitting together
> Progression – challenging but attainable goals which keep taking learning Forward (McClelland, 1993:1).

This contrasts to the five principles the PEDP was based on, as noted in Chapter 3, and which was only some five or six years earlier. These were:

> Laying the Foundations
>
> Learning and Teaching
>
> The Framework
>
> Contexts
>
> Evaluation

The Concepts and Skills approach was no longer in use but the view that any curriculum should attempt to bring about change under three headings – Attitudes, Knowledge and Understanding and Skills, as noted in Lothian Regional Council Guidance and acknowledged by Grampian Region, provides the basis for the new curriculum.

It was intended that these guidelines would be implemented by the school in phases and Kiddie considered that in order to properly address the issues it has to be recognised that the 5-14 programme will stretch for a decade and he suggests that

> 'it [the 5-14 programme] can be thought of as a train approaching a platform. Carriage 1 is English Language – this is being worked on actively in 1993-94. The opening consideration of mathematics is also underway although the track is not fully in the station. Looking down the track we see Expressive Arts, Personal and Social Development, Environmental Studies, Religious and Moral Education' (Kiddie, 1993:4).

The Scottish Office anticipated that all the guidelines would be implemented by 1998/99 with Environmental Studies implemented by the end of the session 1995/96. How far down the track the schools actually were in their implementation of the curriculum guidelines will be demonstrated in the next chapter.

Process

For the purposes of this research, the following pages concentrate on the process and content of the Environmental Studies curriculum. The rationale for Environmental Studies being a specific curriculum area was given in Working Paper No1[6] on the breadth and balance of the curriculum as:

> 'Environmental Studies should stimulate childrens' awareness and understanding of their environment and their place within it, enable them to learn about factors which have shaped it, and develop their knowledge of other people, places and times. They must provide a structured development of childrens' knowledge and understanding of history, geography, science, technology, and also of health and home economics. The teaching of environmental studies should give children opportunities to use and develop their skills in language and mathematics, to develop investigative and practical skills and powers of expression, and to acquire positive attitudes and values. They should prepare children progressively for the secondary school curriculum where separate subjects will be the basis of study' (SOED, 1991:i).

The Working Group for Environmental Studies (RDG3[7]) was established with representatives from Head Teachers, Advisers, Lecturers, Development Officers, and a principal teacher, under the convenorship of the Senior Depute Director of Education for Central Region and with an Assessor from the Scottish Education Department. Thus, the

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[6] Working paper No 1, published in 1989, identified and outlined five broad curriculum areas – English Language, Mathematics, Environmental Studies, Expressive Arts and Religious and Moral Education.

[7] Research and Development Group 3 – 'Following a period of consultation, Review and Development Groups (RDGs) were set up under the auspices of the Scottish Consultative Council on the Curriculum to give advice on each area of the curriculum. Each RDG undertook a wide-ranging view of good practice in order to set out clearly the knowledge, understanding, skills and attitudes appropriate to its curriculum area: and then to advise on the formulation of national curriculum guidelines which would identify the aims of the study, the ground to be covered, the way that learning should progress and how pupils' attainments should be monitored and recorded' (SOED, 1993:vii).

practice of using groups of teachers and educationalists that, in this work was first referred to in the 1930s continued. The group sought existing good practice in schools and consulted with all the education authorities and they acknowledged that they had been 'strongly influenced by advice received'.[8]

RDG3 produced its first report, Working Paper No 13, in December 1991 and comments were invited and received from numerous sources until June in the next year. As mentioned above, this report contained comments on the type of curriculum the politicians would like to see. By inviting comments from education authorities, schools, teachers and many other groups and organisations, it was possible for many other non-educationalists to also express their opinions about the form and content of the curriculum.

This initial report contains reference to the influence of previous curriculum reforms particularly the role played by the Primary Memorandum in gaining a general acceptance of the curricular area of Environmental Studies, and the subsequent advice provided by the Scottish Committee on Environmental Studies in the Primary School (SCES) and the Primary Education Development Project (PEDP). However, it will be demonstrated that new terminology and formats were introduced in this document, only to be amended in the final guidelines.

The Working Paper defined the aim of Environmental Studies thus:

> 'Through experiences provided and organised for the purpose, pupils should achieve knowledge and understanding of the environment, develop positive attitudes to it and skills which will enable them to interact effectively with it' (SOED,1991 WP No 13:6).

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[8] The Scottish Office Education Department, Curriculum and Assessment in Scotland A policy for the 90s, Working Paper No13, Environmental Studies 5-14 (Including the Social Subjects, Science and Health, and Technology Subjects p3

Their proposed structure for the Environmental Studies curriculum consisted of Attainment Outcomes within which there were a number of Strands and is shown in Appendix 13. The proposed Attainment Outcomes were as follows:-

Attainment Outcome 1 – Science in the Environment
Attainment Outcome 2 - Place, Time and Society
Attainment Outcome 3 – Living with Technology
Attainment Outcome 4 – Healthy and Safe Living
Attainment Outcome 5 – Investigating
Attainment Outcome 6 – Designing and Making
Attainment Outcome 7 – Positive Attitudes to the Environment

Details are given in Appendix 14.The aims of this development of positive attitudes to the environment are shown in the Appendix 15.

Within each attainment outcome attainment targets are given for Levels A-E. For example, within Attainment Outcome 1- Science in the Environment

Living Things – Plants and animals including humans; their distinctive features and characteristics. Pupils should gain knowledge and understanding:

Level A	**Level B**	**Level C**	**Level D**	**Level E**
Of the variety of living things including birds, mammals, insects	of the variety of living things, plants and animals in the local environment	of some of the main features of different groups of animals and plants	of similarities and differences between the main groups of living things	Of general characteristics within some of the groups of living things and the use of a key for identification
e.g. feed and observe birds over a period of time in winter...	*e.g. identify and describe species of animals and plants found in the local woodland or park*	*e.g. investigate both at first hand and by using books, films and videos, the variety of features found in different minibeasts, birds, trees...*	*e.g. investigate one of the main groups of living things such as insects: note the features they share with other named groups, the characteristics which make them different and the variety within the group...*	*e.g. create a key to identify a group of living things...*

Examples of how each attainment target can be met are given. These are examples only and it was left to schools/teachers to decide. Many of the attainment targets could be met through the study of various aspects of farming and associated land use; many of the

examples relate directly or indirectly to the rural environment, for example at Level C under Conservation and the Care of Living Things, the example given is 'investigate plants and animals that are grown and reared for human food...' at level D the example is 'visit a local farm and make a flow diagram of its food production process. In Attainment Outcome 2 – People Place and Society – Journeys and Movement at level C-C2 of UK trade within the wider world the example is given 'draw a flow diagram of a commodity "from farm or factory to home."'

A large number of responses were received by the Group from both local authorities, individuals and organisations with an interest in the curriculum. Examples of some of the comments are given in Appendix 16a to indicate the main concerns about the proposals put forward. Briefly some of the concerns raised can be summarised as follows:

- The approach to continuity between upper primary and S1-2 is welcomed.
- The rationale could be clearer and the paper is not user friendly
- Targets A-E are not helpful, 3 broad planning bands would be better – P1-3, P4-6, P7-S2 .
- The thematic approach should be continued even in upper primary.
- More detailed advice and resources required to assist with the implementation.
- Some of the examples given are not helpful.

Of the three areas given in the examples, their comments on areas of the curriculum where farming may be used as topic are shown in Appendix 16b. This provides an indication of the level of detail that was provided in the responses and also the differences in opinion between the local authorities.

The following comments are from the Scottish Society for the Prevention of Cruelty to Animals (SSPCA) an organisation with interests both in education and farming methods. It is used as an example because it relates to farming and also indicates how this

particular organisation tried to influence curriculum content in relation to specific, often controversial, issues.

General ' Ideally we would wish to see more mention of animal welfare in the paper. If children are not taught to respect and care for other living creatures, we cannot expect them to nurture and demonstrate respect for the environment.'

Level D Attainment target 2

'there is too much emphasis in our opinion on food production in this strand. However we would recommend that if children are to learn about modern farming techniques, then this should include a study of the livestock components of the vast food production industry ie the battery hens, broilers or tethered sows which are the reality of the intensive system.

Experience in schools indicates that many teachers still present a very rosy, one-sided picture of farming. Whilst this may be appropriate at Levels A and B, older children should be given a more balanced view and be made aware of the pressures which have led to the development of intensive farming' **SSPCA**

Following the completion of the process of consultation, a substantial amount of work was carried out to amend the document before its final publication. It is difficult to say just how much these amendments were due to the comments received or to pressure within the Scottish Office Education Department itself, but the final guidelines are significantly different from the consultation document.

5-14 Environmental Studies Guidelines

In March 1993, Curriculum and Assessment in Scotland National Guidelines 5-14 Environmental Studies was published and distributed to schools and local education authorities with the invitation from the Secretary of State to include them as soon as possible in the teaching of Environmental Studies. It was suggested that Environmental Studies should take up to 25% of the total teaching time.

The guidelines were thus neither automatically nor immediately used in every school in Scotland. Each local authority gave careful consideration to the contents of the guidelines before making recommendations to their committees and schools. For example, the Director of Education for Strathclyde region prepared a report in May 1993 which summarised the guidelines with the recommendations that the sub-committee

a) 'note the contents of this report;
b) agree that the authorities support staff and staff in schools should not take precipitate action to implement these guidelines but should continue to operate within the framework defined for the implementation of the 5-14 programme by the previously approved committee paper on "Pace of Implementation of the 5-14 Programme";
c) request the Director of Education to present to the sub-committee an action plan for securing their implementation in a manner acceptable to the authority no later than the end of November 1993' (Strathclyde Regional Council – Department of Education, May 1993).

However, they represented a part of the first comprehensive set of guidelines on a national basis for the primary and lower secondary curriculum and they would eventually to be introduced into every school. While the local education authorities and the schools themselves retained some control over timing and implementation, it was noted in a

SOED publication that schools should be beginning to implement the Environmental Studies curriculum by the session 1995-96, the Scottish Office were able to retain control through the system of school inspections and reports. For, as noted by Darling (1999),

> '...the Scottish programme does not have the force of law: for this to happen would require major change, since the statutory powers of the Secretary of State for Scotland are confined to the issuing of "guidance" on the curriculum. In practical terms, however, observance of the guidelines is mandatory: they constitute an important part of the framework which the Inspectorate uses to judge the work of a school, and no school can today afford the risk of an adverse judgement' (Darling, 1999:34).

Content and form

Appendix 17 shows the Framework of the new Environmental Studies curriculum. It differs from the original proposal in Working Paper 13 both in terminology[9] and Attainment Outcomes. Appendix 18 shows a comparison of the proposed structure and the final structure to demonstrate the changes and the differences between the two.

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[9] The terms used are defined as follows:
Attainment outcomes: these are important broad consequences in each curriculum area.

Strands: These are the key constituents of an attainment outcome.

Attainment Targets: These describe more specific learning goals within each attainment outcome, at five broad levels of development.

Levels: Attainment targets are set out in five levels of increasing demand
(SOED the Balance and Structure of the Curriculum 1993)

The phrase 'developing positive attitudes to the environment' used in the consultation paper is changed to 'developing informed attitudes' and it is suggested that it is one of the strands which runs through much of the proposed Environmental Studies curriculum rather than being seen as a separate attainment outcome. The term is linked very closely with that of Environmental Education which is also seen as permeating much of the Environmental Studies curriculum (SOED, 1993:5).

Although the Minister had expressed his reservations about topic work in the earlier document, in the Guidelines it is acknowledged that this method is widely used in primary schools. It stresses that careful planning must be used to ensure that the topics cover many aspects of the curriculum and that the teachers are aware of the,

> 'areas of knowledge, understanding and skills which are to be integrated in undertaking the topic'(*ibid*:10).

Guidance is provided on how the planning should take place and suggests that there should be a form of collaborative planning between teachers, pupils, and the community:

> ' The school should consider:
> - what pupils might bring to the school;
> - flexibility in the programme which would allow pupils to pursue some choice of personal interests;
> - special experience and expertise of staff, parents, and friends of the school;
> - the environment or context of the school itself;
> - the wider local area as a resource for learning and teaching;
> - opportunities for extension of local experience towards Scottish, British, European and wider world dimensions;
> - how to respond within the programmes of study to seasonal changes and events;
> - how to respond within the programmes of study to contemporary issues and events and to chance occurrences' (*ibid*:75).

The implications of this collaborative planning for the potential place of farming in the Environmental Studies curriculum is obvious when the majority of the population, the primary schools and, in all probability, the teachers live in urban areas.

Location of farming in the Environmental Studies Guidelines

In the previous chapters it has been demonstrated that farming has been considered as a topic in all the relevant major curriculum advisory documents since the Primary Memorandum. However, the form of the 5-14 Environmental Studies Guidelines does not specify topics for study. Notwithstanding this and the comments above, it is possible to use farming/agriculture for many of the contexts given. It is suggested (by the author) in Table 5.1 where there are opportunities for using farming. This clearly demonstrates that there is potential for using farming to deliver different sections of the curriculum.

Table 5.1 Farming in the 5-14 Environmental Studies Curriculum

Component	Attainment Outcome	Strands where farming topic is relevant
Science	Understanding Living Things and the Processes of Life	Variety and Characteristic features
		The processes of life
		Interaction of living things with the environment
	Understanding Energy and Forces	Properties and Uses of Energy
		Properties and Uses of Energy
		Forces and their effects
	Understanding Earth and Space	Materials from Earth
Social Subjects	Understanding People and Place	Ways in which places have affected people and people have used and affected places.
		Locations, linkages and networks
	Understanding People in the Past	Studying people, events and societies of significance in the past.
		Developing an Understanding of change and continuity, cause and effect.
		Considering the meaning of heritage
	Understanding People in Society	Conflict and participation in decision-making in society
		Economic organisations and structures
Technology	Understanding and Using Technology in Society	Technology and human needs
		Technology and demand for resources
		Technology as it affects lifestyles
		Technology to control the environment
		Technology responding to values and scientific progress
	Understanding and Using the Design Process	Properties of materials and tools in relation to their practical uses
		Devices and tools associated with control and their applications
		Effectiveness of design in creations/systems and environments
Health Education	Healthy and Safe Living	Health and safety in the environment
Information Technology	Understanding and Using Information Technology	Applications of information technology in society

However, in the guidelines actual references are made to farming in the following:

Science

Understanding Living Things and the Processes of Life

Interaction of living things with their environment

Stages P4-5
Interaction between humans and their environment in relation to aspects such as farming, fishing and other local industries
Stages P7-S2
The various ways in which humans can act on the environment, whether to its benefit or detriment, *eg forestation, dealing with pollutants, farming methods, chemical processing plants.*

Social Subject

Understanding People in the Past

Stages P4-6 and P&-S2
Trace particular developments across a significant spectrum of time eg Farming, transport, housing

Understanding People in Society

Strand: Collecting Evidence Level B
Choose artefacts, activities and events in order to answer specific questions about them *eg look at farm implements in the museum to find out how people used to plant their crops...*

Technology

Understanding and Using Technology in Society

The development of an understanding of design and manufacturing processes;
Stage P7-S2 Technology as it effects life styles:
Appropriateness of products and built environment to different communities *eg agricultural implements in different communities.*

Understanding and Using the Design Process

Interpreting and Evaluating: Level E

From generalisations about the relationship between particular technological strategies and particular circumstances, *eg the most suitable designs of plough for hard or rocky terrain.*

Fieldwork

One of the main features which is stressed as being important in the delivery of the Environmental Studies curriculum is the use of fieldwork,

> 'the development of informed attitudes to contemporary and future environmental issues will be enhance when pupils gain direct access to the world outside school...The provision of first-hand experience through fieldwork for pupils is central to the methodology of Environmental studies'(SOED, 1993:104).

The reasons given for why fieldwork is important are:

- It is a method of teaching and a process of learning
- It is active
- It takes place outside the classroom
- It can play an important role in enriching and expanding other areas of the curriculum
- It can be highly motivating
- It can greatly contribute to the development of aesthetic attitudes
- It forms an important bridge between school work and the child's world out of school (*ibid:*104-105).

It is noted that a visit to a farm is one of the range of opportunities given for fieldwork within a day's compass of the school.

Use of resources

The Guidelines suggest that schools will want to review the resources that they already use and establish whether they are still suitable as well as identifying new curriculum where there are gaps and inefficiencies which need to be rectified. It is suggested that the following should be used:

Printed Materials

Text books – should be reviewed to ensure that they will 'usefully support the schools' policy and programmes for Environmental Studies.

> ' the school will require access to a variety of reference books and materials to sustain investigative work in Environmental Studies. This will include encyclopaedias, atlases, maps and reference books on a variety of topics, suitable for a range of ages and stages; and sources of information on local and current affairs, such as newspapers, magazines, periodicals, posters and leaflets'(*ibid*: 107-108).

Materials for experimenting, investigating, designing and making

Audio-visual materials and computer software, commercially produced and library based photographs, posters, pictures, films and video and tape recordings will all be a valuable source of information.

Physical resources in the area around the school

Human resources available to the school

Teachers as a resource

The type and availability of resources related to farming and those actually used by the teachers are investigated and identified in Chapter Seven.

It is suggested that while it is the responsibility of the head teacher to monitor the balance of the curriculum all teachers should be to be involved in the planning process and that programmes of study should be developed. This programme will be incorporated into the school development plan.

A 'farm' topic is used to illustrate how existing programmes may be adjusted for the new curriculum.

> 'Some studies may require a shift of emphasis; for instance, in a programme where there had been little emphasis on studies relating to *Understanding Living Things and the Processes of Life*, an existing topic on 'The Farm' could be

adjusted to accommodate some of the key features of the outcome...'(SOED, 1993: 84).

Examples of how farming topics are used and their place in the programme of some schools are given (in Appendix19).

Although most of the discussion above has been in relation to the Environmental Studies Curriculum, evidence from individual schools shown in Appendix 20 suggests that farming plays a role as a cross-curricular topic. The use of topics in the delivery of the curriculum has been mentioned elsewhere in this chapter and the SED suggested that

'cross-curricular topic work in primary schools has been **successful** in:

- providing contexts for learning; and
- bringing together different areas of knowledge and skills within a single study

It has been less **successful** in:

- ensuring that pupils make progress in their knowledge and understanding, particularly within environmental studies' (SED, 1994:11-12).

Any curriculum changes that have been proposed or advised by central institutions have been accompanied by interpretation and advice at a local authority level and the 5-14 curriculum was no different. At the time that the guidelines were issued, the regional education authorities had well established advisory services and these services produced a variety of guidance material for the schools in their areas. This guidance ranged from teachers support material, in-service training and other support material. Three examples are given below.

For example Lothian Region produced a staff development package for Environmental Studies under the title of '5-14 into Practice'. An example of the way in which it interpreted one particular section of the guidelines is given in Appendix 21. This package consisted of a series of documents including one on Topic Planning. However, unlike previous guidance (as noted Chapter 3) no specific topics are suggested and it is left to the individual schools/teachers to choose them, although a framework for

selection is given. Thus it would appear that the local authorities are giving more control over the curriculum content to the individual schools.

Fife Regional Council produced Environmental Studies Regional Guidance 5-14 and again reproducing the guidelines in a different format. It is a very substantial document which does provide a suggested whole school framework. This is given in Appendix 22. In this particular framework a farming topic is not specified but is not necessarily excluded as various references are made to farming activities in the very extensive list of suggested activities. For example under Seasons at P1-3 it is suggested that pupils should look at lambs/sheep/ cereal crops.

However, despite all the redesigning of the original guidelines by the local authorities they were, for the first time, implementing a shared set of principles and, in whatever form the guidelines were reproduced, the main attainment outcomes and targets remained the same.

Advice from national agencies

In 1996, in the middle of the implementation period for the 5-14 Programme, the local government system in Scotland was reorganised. The twelve large regional authorities ceased to exist and they were replaced by 32 smaller unitary authorities. The effect of this was that the curriculum support services in most of the new authorities were, if they existed at all, greatly diminished. As Cameron and Casteel (1999) point out,

> ' As progressively less scope is offered for creativity and innovation at a local level, and in default of all but the largest authorities being able to provide a comprehensive service, it may be that the development officer jobs of the future will increasingly come to be with central bodies or partnership agencies, with local authorities offering support for maintenance and inspection follow up'(Cameron and Casteel, 1999:178).

One of these national agencies referred to above is the SCCC and, following the publication of the guidelines, this agency began to produce a large volume of support material to assist the teachers in the implementation. These materials ranged from resource catalogues, staff development support pack and a Curriculum File. They were either distributed directly to schools or provided to them through the use of a voucher system whereby the schools were issued with a voucher to claim a particular publication.

The Environmental Studies 5-14 Staff Development Support pack consisted of seven booklets which were developed from the work carried out for the PEDP. Farming, which was one of the topics for the PEDP, is not included, although as noted previously, a final draft of an education pack on farming had been completed for the earlier curriculum project. The topics are: Fieldwork, Fishing, Village Study, Early People, River Study, We Live Here and Mr McBurr. It is interesting to note that in the Fishing booklet it is suggested that

> 'Learning and Teaching benefit when a topic is well supported by good, easily accessible, published resources. The topic of fishing is well supported in this way, with a wealth of resources available from sources as diverse as the Sea Fish Authority and museums'(SCCC, 1994 Fishing:5).

This demonstrates the reliance on resources from interest groups/industry and the influence that such resources are able to exert over curriculum selection and content. It also demonstrates the close working relationship between SCCC and conservation organisation as two of the booklets, Fieldwork and River Study, had been sponsored by the RSPB and SNH, respectively.

The booklet, Fieldwork, also provides a list of those organisations which might be able to help with field work. The selection is as follows:

Aberdeen Urban Studies Centre
Central Scotland Woodlands Countryside Trust
Farming and Wildlife Advisory Group*
Forestry Commission
Friends of the Earth Scotland
Historic Scotland
Keep Scotland Beautiful
National Trust for Scotland
Royal Society for the Protection of Birds
Scottish Association of Agriculture*
Scottish Conservation Projects Trust
Scottish Countryside Rangers Association
Scottish Environmental Education Council
Scottish Field Studies Association
Scottish Museums Council
Scottish Native Woods
Scottish Natural Heritage
Scottish Tourist Board
Scottish Wildlife and Countryside Link
Scottish Wildlife Trust
WWF Scotland
(SCCC, 1994 Fieldwork:19-20)

Of the two organisations noted above and which are directly related to farming (and shown*) only the Scottish Association of Agriculture had an educational remit. The Farming and Wildlife Advisory Group focused on advising farmers and landowners about conservation management.

In addition to this list it is recommended that teachers use 'Who's Who in the Environment: Scotland 1993, published by Scottish Natural Heritage,

> 'This is the most comprehensive source book of organisations in Scotland which are concerned with different aspects of the environment at regional or national level. This directory is a most useful resource for all schools' (*ibid:*20).

This publication provides one of the source books for the questionnaire sent to organisations with an interest in farming and which produce resource materials.(The other is the UBI Directory of Resources). It was used because of the comprehensive

nature of the information given on organisations. Additional details relating to this are given in Chapter Six.

In order to disseminate information about SCCC resources and those of other organisations, SCCC distributed to all headteachers in primary schools a 'Curriculum File' which contains information on new publications and other resources relating to all aspects of the 5-14 curriculum. The file is updated periodically by the SCCC and organisations may send in publicity material for their own resources/educational activities for inclusion in the distribution. Appendix 23 provides a list of the range of organisations taking advantage of the method of publicity.

While no recommendations are given by the SCCC on the different organisations it may be that teachers will see inclusion of material in the file as indicating approval and legitimizing the organisation and its educational work. In addition, it is a resource which is distributed nationally and, as such, is in a position to influence every school and teacher in the selection of topics and resources.

To assist with the planning of the Environmental Studies Programme SCCC, in partnership with SNH, published Environmental Studies 5-14:Planning a Whole School Approach. This package contained a video and workshop material and used an individual school in West Lothian, Peel Primary, as the exemplar. Their Environmental Studies programme is given in Appendix 24 and demonstrates that farming is considered to be a suitable topic for inclusion in this programme.

These two organisations, SCCC and SNH, have worked closely on a number of projects associated with the Environmental Studies Guidelines, two of which have already been mentioned.

With so many organisation undertaking educational work and producing resource materials, the SCCC collaboration with SNH and also Scottish Wildlife and Countryside Link[10] held a series of workshops, under the title 'Common Agenda' workshops on a number of issues relating to the curriculum. The aims of these workshops were:

- 'to share and exchange ideas as providers of resources on aspects of the natural heritage to the formal curriculum in schools;
- to be alerted to current developments in the context of curriculum and organisational change and possible implications;
- to explore ideas behind a 'common agenda' for the natural heritage sector
- to agree on a plan for the production of more effective and better quality products for schools, making the best use of existing resources and expertise' (SCCC/SNH/SWCL, 1995:1).

Those attending the workshops (often over 40 in number) included representatives from the main conservation organisation in Scotland, for example, the National Trust for Scotland, RSPB, Scottish Wildlife Trust and the World Wide Fund - Scotland, government agencies such as Historic Scotland and the North of Scotland Water Authority, local countryside initiatives, for example, the Clyde-Calders project, local authorities and individual teachers. Representing the farming community at these workshops were staff from the Scottish Farm and Countryside Educational Trust.

In 1998, as a result of these workshops, and in response to concern about quality assurance of resources and bias, Guidelines were produced by SCCC/SNH/SWCL on the preparation and evaluation of curricular resources. It was recognised that the organisations involved in these workshops would be amongst the main resource providers for the Environmental Studies 5-14 programme and these workshops thus had the potential to be influential on both resource provision and on the resource providers.

[10] An umbrella organisation for the main conservation organisations

It is important to note that one of the reasons that there was a reliance by the schools on resources from organisations such as those noted above was that commercial publishers had responded in only a limited way to the requirements of the 5-14 Curriculum because of the relatively small market (2,700 schools) and the educational system which was different and distinctive from the rest of the UK. Further it has been suggested that 'the niche market' situation which had resulted provided a series of new opportunities, for environmental organisations, in developing curriculum material to support the new curriculum. In the next chapter it will be shown which organisations have responded to meet this market. It is clear from the workshops that encouragement is given by those responsible for the curriculum to those with potential for influencing teachers and pupils with their own views and beliefs. However, what is finally selected is left to the individual teachers, and

> ' It must be remembered that we live in a free market economy and that schools are entirely free to make choices on their selection of resources based on professional judgements. "Quality" may also be a highly subjective concept and the possibility of "curriculum censorship", however well-intended could result through a crude system of quality assurance some time in the future'(SCCC/SNH/SWCL, 1995:3).

The question of bias is also discussed in this publication and it has been the subject of debate and research in the 1990s. For example the Consumers Association Report on monitoring the use of business sponsored materials (Consumers Association 1997), and this has resulted in a number of guidelines (at a UK rather than at a Scottish level) being produced for commercial and environmental organisations, eg the National Consumer Council Sponsorship in Schools Good Practice Guidelines, referred to earlier in this work. It is however not intended in this particular piece of research to investigate the contents of resources and thus identify any bias, for or against farming, which may be contained in the resources going into the schools for use in the 5-14 Programme.

Farming in the 5-14 Programme at an individual school level

Evidence has been obtained from other sources to provide an indication of the use of the farming topic in the 5-14 Programme at an individual school level. Perhaps the most detailed is a survey undertaken in 1994 in the Scottish Borders by the Borders Environmental Education Forum (BEEF). This group sent out a questionnaire to all 74 primary schools in the region, 50 of which responded. The aim of the questionnaire was to provide an indication of which topics were being covered by the schools in order for the resource providers to tailor their resources to closely match the requirements of the schools. The results from this clearly indicated that farming was used as a topic in 'People and Place'. The number of schools undertaking a farming project and the class is shown in Table 5.2.

While the presence of farming was clearly demonstrated under 'People and Place', further results indicated that it rarely, if ever, was used as a main topic in any other the curriculum areas. For example only one school indicated that, In People in the Past, it undertook a topic on Farming in the Past. In the curriculum area Living Things and Processes of Life farming as a topic was not mentioned, 'Trees' was the most popular single topic across all levels. Other popular topics included the Seashore and Minibeasts, Pets, Dinosaurs and Owls.

Table 5.2 – Borders Environmental Education Forum (BEEF) survey of primary schools 1994

Topic	P1-2	P3-5	P6-7
Farming	22	26	10
Houses and Homes	37	19	8
Village-Town Study	21	38	23
Europe	4	25	32
Edinburgh	2	5	5
York	0	2	10
Scotland	3	32	24
Belgium	0	1	5
France	0	8	15
Australia	0	6	6
Yanamamo	0	3	8
Japan	0	3	3
Benin	0	3	14
Arctic Child	5	7	8
Rain Forest Child	2	9	17
American Indian	1	2	1
New Zealand	0	0	1
USA	0	0	1
The Borders	0	1	0
Hospitals	1	0	0
Holidays	0	1	0
Fantasy Island	1	1	0

Additional, but less detailed evidence of farming being used as a topic can be found from a series of questionnaires sent out by the Scottish Farm and Countryside Educational Trust as part of research for their School- Farm Links project. The results of these surveys are given in Table 5.3

Table 5.3 Results of SFACET questionnaires to schools

Midlothian (part) - April 1996 (Penicuik area only) 10 schools - 8 replies (8 primary - 6 replies 2 secondary - 2 replies) 80% return rate Farming studied in all of the schools, throughout primary but especially at P3,4,5. Only one primary did not study farming as an individual topic and all the primaries visited a farm as part of their studies
East Lothian - April 1996 10 out of 39 returned (33 primary - 7 returned 6 secondary - 3 returned) return rate 26% Farming studied in all the schools. primary - lower to middle especially at P4 50% visited farms as part of work.
Scottish Borders- October-December 1995 82 schools – 45 replies (73 primaries - 39 replied 9 secondary - 6 replied) 55%Return rate Farming studied in all 39 primaries, throughout all stages but mainly at P3-5 Farming studied as individual topic in 34 primary schools and also included as part of topic work in 30. Every primary school covered farming either as a separate topic of part of project work. All but one primary visited a farm as part of their study.
City of Aberdeen - September 1996 78 schools - 24 returned (12 nursery - 5, 53 primary – 15, 13 secondary – 4) Return rate 31% Farming studied in all but one of the schools (other looks at crofting as part of Highland Clearances) In primary mainly studied in lower primary p1/2, 75% of schools visited a farm as part of their study.
Highland (Inverness, Black Isle and Mid and Easter Ross) - April 1996 142 schools sent out - 64 replies (125 primary -52, 17 secondary- 12) return rate 45% Farming was studied in all of the schools - throughout primary and secondary (Geography Dept.) Only 50% primaries undertook a farming topic. 79% of primary undertook a farm visit

While this provides evidence that farming projects were being undertaken in schools throughout Scotland, both rural and urban, it is possible that the return rates also indicate that there are many schools where farming is not part of the curriculum.

The returns also provide evidence that farming topics were undertaken at different levels which vary from each local authority. For example, in Aberdeen City farming projects

were more often found at P1-2, for the other areas they were found at P3-5. The majority also visited a farm as part of their study.

Review of 5-14 Environmental Studies Guidelines

In early 1998, while many schools were still in the implementation stage of the Environmental Studies curriculum, the Education Minister, Brian Wilson, announced in a press release that a phased review of the 5-14 Environmental Studies guidelines was to be undertaken with a view to 'simplification and clarification'(Press Release from Scottish Office, March 17 1998).

Mr Wilson said

> ' I have made a clear commitment to raising standards in Scottish schools and to improving the quality of pupils' learning. In response to concerns expressed by many teachers about the 5-14 Environmental Studies guidelines, in light of the main recommendations of the recent HM Inspectors of Schools report 'Achieving Success in S1 and S2' and following discussions with COSLA, I have asked the newly reconstituted Committee on Implementation 5-14 to begin a review of these guidelines'(*ibid*).

It was intended that the review would be phased and that science, where there were many concerns raised by the teachers, would have first priority.

The SCCC[11] were to play a main role in this review and it sent out a consultation document in the autumn of 1998 to be returned to them by 31 December 1998. The questionnaire 'seeks the views of those most closely associated with teaching and development of Environmental Studies in our schools' (SCCC, 1998).

[11] The work of SCCC was also under review and in 2000 it amalgamated with the Scottish Council for Educational Technology (SCET) and it now called Learning and Teaching Scotland.

This consultation took the form of a questionnaire with 'a series of statements related to the possible shape and content of revised Environmental Studies Guidelines. Respondents were asked to tick the appropriate box from strongly agree, agree, disagree, strongly disagree. Space was also available for comments. A summary of contents of the questionnaire is given in Appendix 26.

By early 1999 it had been reported that SCCC had received 2,800 responses to its questionnaire and that some local authorities were already undertaking a number of their own reforms,

> 'But North Lanarkshire which has already begun to implement the reforms, has criticised the curriculum advisers and says it would be "folly" to amend the guidelines for the sake of superficial changes. Cutting the content and skill coverage does not make environmental studies more manageable for teachers, the authority says. "Such changes could result in a contradiction of our interpretation and negate the work already undertaken and the financial commitment of the council"' (TESS, Thousands reply on 5-14, 29 January, 1999).

The same article also refers to the fact that several authorities had already cut back on the allocation of time to environmental studies to concentrate on literacy and numeracy.

An example of a response to the questionnaire from an environmental organisation is given below:

> 'The Environmental Studies 5-14 Programme potentially provides a framework for developing knowledge and understanding, skills and informed attitudes regarding all aspects of the environment through an integrated approach. This approach emphasising links and connections between subjects separated by traditional subject boundaries is highly desirable and should be strengthened by clarification and simplification of the existing Guidelines and by ensuring that teachers have the skills and confidence to deliver the Programme. We regard it as destructive to dis-aggregate the components without ensuring that the connections will be made explicit. Equally dominance by one of the components, for example science, would destroy the concept of the Programme'(SEEC internal committee paper, December 1998).

In 2000 Learning and Teaching Scotland issued a new Environmental Studies guideline, Environmental Studies – Society, Science and Technology. The main changes to the previous guidelines include the removal of the information and communications technology and health education components. These have been issued as separate guidelines as they are considered to be cross-curricula activities. The new Environmental Studies guideline retains the organisational framework of knowledge and understanding, skills, and developing informed attitudes. While it is noted that farming is mentioned in the revised curriculum, it is not intended in this thesis to analysis this further. This is due to the remainder of the research focusing on the earlier guidelines and their impact on the schools and resources.

Conclusions

In Chapter Four there was a detailed discussion of the role the curriculum plays in allowing those in a position of power to retain power and control in society. This chapter has outlined the actions taken in the late 1980s early 1990s by the Scottish Office and the politicians to gain control over the curriculum through the introduction of national guidelines. The new curriculum has been described as 'totalitarian' and, rather than change the law to give control of the curriculum to the State, the system of school inspections has been used to ensure its implementation.

The 5-14 Curriculum Guidelines, which were developed over a period of years, through committees and extensive consultation, are the first nationwide curriculum in Scottish schools. Although not totally prescriptive, and while certain attainments must be covered, it remains up to individual schools and teachers to decide on the exact vehicles for its delivery and the individual topics. Through the development of whole school plans, it would appear these topics are planned well in advance, and it is suggested in the Guidelines that a 3-year cycle should be adopted.

However, evidence suggests that local education authorities attempted to retain their control over the curriculum through the interpretation of the guidelines and help teachers within the schools in their areas with the implementation. The local education authorities' individual interpretations and styles may have differed but the main elements of the curriculum remained the same. It is noted that it is at the school level where the topics may differ and thus the schools and teachers are still to a certain extent able to play an influential role on what knowledge is taught.

In this Chapter it has been demonstrated through analysis of the Environmental Studies Guidelines and individual examples that there is a place for farming as a topic in the delivery of the new curriculum and that it is part of the selection of knowledge, the 'selective tradition' of Williams and Apple.

However, while detailed guidance is available at a national level on other topics, through the publications of SCCC, this type of guidance about the use of farming topics has not been produced. It thus remains for others such as the farming organisations to produce suitable material. It has been suggested that topics such as 'fishing' should be undertaken because they are well resourced. If farming is not a well resourced topic, it may well be that it will not be chosen and other topics will be used as alternatives for reaching the attainment targets. This could have the result of fewer schools undertaking farming projects.

In addition to this there is an emphasis given in the Guidelines to the use of local knowledge and the existing knowledge of children and teachers. This existing knowledge is part of the 'cultural capital' of the teachers and pupils, which was referred to in Chapter 4. For the majority it will be based on urban experiences rather than rural and again this could be a significant factor in the decision as to whether to undertake a

farming project. It may also play a part in the depth of understanding that an urban child might have of a farming topic.

As noted in this chapter curriculum advice on the Environmental Studies Guidelines (and other areas of the curriculum) has been produced particularly by SCCC. One aspect which has been identified is that SCCC has been working in partnership with organisations such as SNH and RSPB. This demonstrates the potential for certain groups in society to play an influential role in curriculum delivery and the selection of knowledge. It was also noted that the final selection is value laden and, therefore, it must be asked 'is this 'selection' of cultural artifacts into the curriculum a value-relevant, political activity or process'. Thus, the key question to emerge is what role, if any, does the farming community continue to play in the resourcing of farming in the 5-14 curriculum? Further what can the resourcing of farming tell us about the selection from knowledge at the end of the 20th Century. Indeed, one may question whether generations of school-children continue to receive a one-sided and partisan approach to farming in the community. Whereas in the late 19th Century and early 20th Century this partisan approach was pro-farming, is the opinion–formation through the curriculum now anti-farming.

Farming organisations, therefore, live and work in contested territory. Many have responded to the challenge of the new curriculum. Their approaches to knowledge formation and dissemination form the basis for this thesis. Their approaches, being part of a contestation, are worthy of study. The next chapter contains a discussion of the methodological concepts available for use within the educational field and it defines the research plan considered to be most appropriate to obtain data relevant to the key research questions identified above. Chapters Seven and Eight contain the results of the questionnaires and surveys.

Chapter Six

Farming in the 5-14 Curriculum: a methodological review and research plan

Introduction

In Chapter Four it was noted that the curriculum is a contested area of educational policy. Various approaches to curriculum theory and development were delineated and, of those, the writings, particularly, of Williams and Apple were elaborated. It became apparent that some theorists assert that politically, economic and socially powerful groups are able to retain control and influence through the control they exert over the education system. This relates, in particular to what is taught in schools. In Chapter Five it was demonstrated how this control comes to be exerted through more recent curriculum change. Thus, curriculum knowledge has become a key ingredient in social power and influence.

Previous chapters and historical literature review have shown how particular groups in society, the farmers and landowners, were able to exert control over the education system and the curriculum through support for partisan forms of knowledge. It also demonstrated the changes which took place in the education system, alongside the relative demise of these powerful groups of landed-interests and the rise of those representing the state. The proceeding chapters have also noted that, historically, farming had a place in the curriculum. In the current 5-14 guidelines it retains this place. However, it was also noted that the new curriculum is open to outside influence from interests groups and that the production of resources is an important element for gaining this influence. Thus the key question to emerge is what role, if any, the farming community continue to play in the resourcing of farming in the 5-14 curriculum.

To answer this question it is proposed to use questionnaires and surveys. Both quantitative and qualitative data gathering is seen as important. This chapter discusses the reasons why.

Methodology

From the brief description given above of the main research question, it would appear that what is required is the collection of data relating to the implementation and delivery of a specific area of the curriculum, farming. Additional data is also required which relates to the opinions of those directly involved in this implementation; and those who are providing resources to assist with the delivery of this particular subject.

The key point here is where to start and what tools are available to help. As Schultz noted many philosophers, including Bergsen, Dewey and Whitehead have agreed that,

> 'it is the common-sense knowledge of every day life which is the unquestioned but always questionable background within which inquiry starts and within which alone it can be carried out' (Schutz,1990:30).

However, it has also been noted that educational research has no techniques or approaches that are exclusively its own and it is from other sources that the two main strands of educational research have been identified; the positivist tradition which is derived from the mainstream of social sciences, and the tradition which is derived from 19th century conceptions of subjective understanding (Barrow and Milburn 1990:119).

The positivist tradition looks at natural science as the only true model and educational researchers who adopt this tradition treat social facts as being identical to natural facts, and form generalisations based on these facts, and from these generalisations derive bodies of theory, on the pattern of physicists looking for universal laws (*ibid*).

In the second tradition, the 'idealism' of Max Weber emphasised the idea of an 'empathic' understanding (*Verstehen*) as the distinctive feature of the human or social sciences (Bynner and Stribley, 1990:3). Those who use this tradition,

> 'seek to understand the educational world in its own terms, without the use of such preformed categories and understandings'(Barrow and Milburn, 1990:119).

This latter approach has been termed 'ethnography' and it is concerned with gaining an understanding of specific activities, for example, in schools while taking into account such aspects as 'values, belief, notions, rituals and rules'. In order to gain data for this approach, case studies are frequently used, often with the researcher taking an active part in the observations. The case studies are usually presented in a descriptive narrative and the criticisms of this approach are based on the questions of reliability of the observations and the conclusions drawn from them. Critics are also concerned that the data may be subjective and they question the validity of the work. However, those researchers who have adopted this approach argue that

> 'their work has a practical value of evoking the nature of life in institutional settings, and uncovering the distortions of official policies that affect teachers and students alike'(*ibid*:119).

The first of these traditions has been adopted by many educational researchers, particularly in the United States and as such, it is often referred to as the 'prevailing paradigm'. The researchers express their observations and results in numerical terms and it is generally known as quantitative research. The value of this type of research is that it can be replicated by others and the reliability and validity of the methods and data can be tested. It is also considered that this type of research is objective. For this research which relates to farming and curriculum content, it is possible that a quantifiable methodological study could aid an understanding of the resource bases and the key players in farming. However, critics perceive it as a highly simplistic approach to what is, in fact, a complex set of issues and that any generalisations gained from this may well be ambiguous. Others have gone further to attack this approach in education,

'by arguing that examining education as though it were a series of natural phenomena is misguided' (Barrow and Milburn, 1990:256).

On the other hand the qualitative approach has gained recognition as being suitable for educational research such as this work. It has been suggested that this approach,

> 'bears much of the heritage of humanistic analysis, elements of so-called soft social science methods (especially those derived from anthropology and sociology), and substantial borrowings from phenomenology[1]' (*ibid*:256).

According to Wiseman,

> 'The Qualitative researcher is not unlike the detective in the classic murder mystery. Starting with a few clues, the detective questions persons connected with the case, develops hunches, questions further on the basis of those hunches, begins to see a picture of 'what happened' start to emerge, looks for evidence pro and con, elaborating or modifying the picture – until finally the unknown is known' (Wiseman,1990:113).

Further it is suggested that qualitative research in education is concerned with

> 'the character of particular occurrences, not the forming of predictive generalisations; its results are written up in personal prose (in which the literary skills of the author may become a factor) rather than in numerical form; it takes its concepts and methods from humanities rather than the sciences; and its subject matter tends to be more comprehensive than the minute studies characteristic of some social science' (Barrow and Milburn, 1990:256).

It has also been suggested that qualitative studies are valuable in the following types of research:

- research that cannot be done experimentally for practical or ethical reasons
- research that delves in depth into complexities and processes
- research for which relevant variables have yet to be identified
- research that seeks to explore where and why policy, folk wisdom, and practice do not work
- research on unknown societies or innovative systems
- research on informal and unstructured linkages and processes in organisation
- research on real, as opposed to stated, organisational goals
  (Marshall and Rossman, 1989:46).

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[1]Phenomenology - the movement that concentrates on detailed description of conscious experience (Collins English Dictionary)

Barrow and Milburn (1990) conclude that this type of approach is particularly useful in detailed field studies of classrooms, and in evaluation reports of materials, curricula and schools. Indeed, for key elements of this research particularly farming resources, experimentation would not appear to be suitable as it is not testing a hypothesis. However, it is concerned with the identification of linkages and organisation through which the curriculum content and delivery can be influenced. The next stage in this work is the development of a research strategy and it is suggested by Yin that in the development of such a strategy three questions should be asked. Firstly, what is the form of the research question – is it exploratory, does it seek to describe the incidence or distribution of some phenomenon or does it try to explain some social phenomenon? Secondly, does the research require control over behavior, or does it seek to describe naturally occurring events and thirdly, is the phenomenon under study contemporary or historical? (Yin, 1989:76)

Also, in developing a research plan that contains qualitative procedures, it is considered that they must be judged on 2 criteria -

- informational adequacy - does the research plan maximize the possibilities that the researcher will understand the setting, thoroughly, precisely and accurately? Will the strategy elicit the sought after information

- efficiency - does the plan allow adequate data to be collected at the least cost in terms of time, access, and cost to participants
  (Zelditch,1989:75).

The aims of this research could best be described from the choices given above as being to explain a contemporary educational phenomenon and to describe naturally occurring events.

Survey investigation or research can be defined as 'the systematic gathering of information about individuals and collectivities, using interview or mail questionnaire methods to illicit information directly and interpreting the data by means of statistical analysis' (Abercrombie, Hill and Turner, 1994:420).

When the purpose of the study is explanatory, Marshall and Rossman (1989) suggest that the research strategy could contain a multi-site case study, history, field study and ethnography and examples of suitable data collection techniques include: participant observation, in-depth interviewing, survey questionnaire and document analysis. When the purpose is descriptive they suggest that the research strategy could contain field study, case study and ethnography and the examples of suitable data collection techniques include participant observation, in-depth interviewing, document analysis, unobtrusive measures and survey questionnaires (Marshall and Rossman, 1989:78).

The question that this research has identified require the author to obtain both factual data and opinions from two groups. Notably, these are teachers and persons working in organisations offering educational activities and resources. It is not about observing the way farming is taught either in or outside the classroom or how the available resources are used or about the way in which children learn about farming. Rather it is about the role resources play in the delineation of the curriculum, particularly in relation to farming, and how this can be contextualised within the discourse concerning control over knowledge bases, power and discourse. The most appropriate survey investigations would appear to be:- analysis of curriculum data and materials, postal questionnaires to provide data from both sets of groups and in-depth interviews to obtain detailed data regarding the use of resources and the teachers' views and opinions on farming and related resources.

Questionnaires comprise a set of questions which need to be either completed by the respondent or by the interviewer. The significant factor about questionnaires and, indeed, interviews is the framing of the questions in order to elicit the full responses. The type and wording of questions is an important factor and is relevant to the way the data is to be analysed. The latter of these factors, the wording of questions, is dealt with in a subsequent paragraph. Types of questions which required to be answered with simple 'yes or no' or which contain a pre-given list are said to be close-ended. For example, a teacher could be asked if they undertook a farming

project or to identify a number of resources from a pregiven list. These types of questions respond to quantitative analysis and the responses may be expressed in a numerical form, such as a percentage. The alternative to this is the open-ended question where the respondents are free to give any answer they wish. These types of responses are best dealt with by qualitative analysis and often contain views and opinions. It is said that if questionnaires are to be sent by post then close-ended questions are preferable as they are usually easier to answer and require no explanation or prompting from the researcher (Abercrombie, Hill, Turner, 1994:341).

Unlike the questionnaire method, particularly those mailed to respondents, the interview method is recognised as being a social interaction with the interviewer taking a part in it and attempting to gain an 'understanding' of the situation. This leads to the debate about whether the information gained is reliable and valid or whether it contains bias, error, misunderstanding, or misdirection. The answer to this would appear to be simple, if the interviewer merely asks questions properly, the respondent will emit the desired information (Gordon,1995:3). The reality of interviewing is, it would appear, far more complex. For example, researchers particularly from

> 'poststructuralist, postmodernist, constructionist, and ethnomethodological perspectives' see meaning as being a social structure and all knowledge is created from the action taken to obtain it' (*ibid*).

This can be interpreted as meaning that interviews create knowledge rather than obtain knowledge and it is further argued that they do not always reflect the reality of a situation but create the meaning that the respondent thinks the interviewer wants to hear. Further, it is maintained by Cicourel (1974) that 'interviewing virtually imposes particular ways of understanding reality on subjects' responses,

> 'Respondents are not so much repositories of knowledge – treasures of information awaiting excavating - they are constructors of knowledge in collaboration with interviewers'(Cicourel, 1974:4).

Thus, the challenge for the interviewer is in extracting the required response while remaining as neutral as possible. There are, of course different types of interview, all on a functional continuum recognised by Moser (1958)

> 'At one end, he places interviews whose purpose is to interrogate, help, educate, or elevate respondents - as in employment interviews or police investigations...Interviews with more abstract or academic goals, like large-scale social surveys, occupy the opposite end of the curriculum' (Holstein and Gubrium, 1995:7).

Within this range the amount of interviewer participation also will vary and participation increases with the end of the spectrum dealing with the social surveys.

Often these types of interviews are called 'active interviews and it has been suggested that,

> 'The interviewer invites and assists narrative production, suggesting the parameters of the sort of narrative being solicited. The active interview is not so much dictated by a set of predesigned set of specific questions as it is loosely directed and constrained by the interviewer's topical agenda, objectives and queries. The image is more of a storyteller on a rather slack interpretive tether to the interviewer's project, not a respondent tightly anchored to an interview schedule. In principle, this storyteller is all people, in their capacities as competent narrators of their lives'(Holstein and Gubrium, 1995:29).

The above relates to a semi-structured form of interview where questions may be prepared in advance but where there is a certain amount of freedom for the respondents and, indeed the interviewer, to address important issues as they may arise during the interview.

Both questionnaire surveys and interviews have two factors in common. Firstly, how many people should be interviewed or used as respondents in a survey to provide the most accurate account (the sample) and secondly, what form should the questions take?

While it might be considered appropriate to survey a whole population to obtain a set of data, this is often not possible or practical due to restrictions such as time and cost. It is, therefore, acceptable to use a sample of this population. It has been argued that

> 'the main criteria when sampling are to ensure that a sample provides a faithful representation of the totality from which it is selected, and to know as precisely as possible the probability that the sample is reliable in this way' (Abercrombie, Hill and Turner, 1994:366).

They note the different types of samples available – simple random samples, stratified random sampling and cluster sampling – used when populations naturally congregate in clusters. They consider that cluster sampling, while in general is less precise than a simple random sample of the same size, 'in practice the reduction in cost per element more than compensates for the decrease in precision' (*ibid*:366).

How the sample is selected is also an important factor, random sampling helps to ensure that interviewer bias is reduced but can it always be assumed that a random sample will provide the necessary representativeness, that those sampled represent the characteristics of the population of interest? The interviewer may also make a selection because it is known that particular respondents are articulate,

> ' in practice, consciously selecting respondents because they are assumed to be capable of narrative production continually underscores the theoretical commitment to dignifying and studying interpretive practice'(Holstein and Gubrium,1995:27).

This again questions the validity and objectiveness of this approach.

Further, the way in which questions are worded, whether in an interview or questionnaire, is important to this research because it will effect the responses given and the overall conclusions that can be drawn from the collected data. Some authors suggest that questions should be posed in ways that are appropriate and meaningful to respondents, acknowledging that question-answer exchanges both provide a context and call on cultural assumptions and local linguistic practices (Briggs, 1986). For example, in this research it would be appropriate to frame questions for the teachers in educational terms, particularly as they relate to the curriculum.

Other authors have looked at question wording at a more detailed level. Moser and Kalton (1971) draw our attention to a number of different factors which include asking questions which are insufficiently specific 'a common error is to ask a general question when an answer on a specific question is wanted.' They suggest that to make the question more specific it should be framed in terms of the respondents' personal experiences. Questions should also be in simple language to avoid any misunderstanding and they could be in a language which is common to the group of respondents, for example, from a specific profession. Questions which should be avoided include those which are worded ambiguously as they may be misinterpreted and 'different people will understand the questions differently and will in effect be answering different questions' (*ibid*). Others include vague words which could provide vague answers, leading questions which may lead the respondent to provide a certain answer, presuming questions, hypothetical questions, personalised questions, embarrassing questions and questions involving memory (Moser and Kalton, 1971:318-31).

The latter type of question which it may not be possible to avoid requires the respondent to recall information that happened in the past. In terms of farming projects and the use of resources it can be seen that recall may be required as they might have taken place weeks or terms earlier. The response thus relies on all the respondents being able to recall past events with equal clarity but this recall will vary. Moser and Kalton (1971) consider that two factors are of primary importance to this recall. These are the length of time since the event took place and the event's importance to the respondent. They consider that for events not forgotten in their entirety, the memory acts selectively, retaining some aspects while losing others, and this results in distorted images.

It would appear, therefore, that there should be greater accuracy with recall the nearer to the event that the questions are asked. Moser and Kalton suggest that one means of aiding recall is to provide a list for the respondent to pick out the answers

and which acts as a type of prompt. However, if the question refers to a specific time e.g. what did you do last month?, the respondent may not be able to recall anything or he may recall an event which happened outside the given period thus giving false data which the interviewer could not be aware of.

The above discussion has highlighted a number of problems associated with survey research and has provided suggestions for avoiding these sources of potential error. Other factors which also have to be taken into consideration include the potential for interview bias and the question of ethics and confidentiality for both the respondent and the publication of the collected data. If respondents can be assured of confidentiality and the fact that they will not be identified personally, this may allow them to answer questions more freely. On the other hand, some may not agree to be interviewed if they feel that their responses will be made public. This is certainly a significant factor for a study of resource providers where information may be considered of benefit to competitors. One way of getting round this problem is by using a coding system that is only known to the researcher, for example, a questionnaire may be given a specific code or the respondent maybe given a code. Simple numerical codes or more complex alpha numeric codes may be used depending on the amount and complexity of the data. Coding can also be used for individual questions and the advantage of using a coding system is that it also provides a means of recording and managing the data, whether using a punch card system or a computer program.

Details of research

Selection of research methods

The research question is what role, if any, the farming community continue to play in the resourcing of farming in the 5-14 curriculum. The foregoing has indicated that there are many possibilities when one considers resource providers and their socio-political impact on an area of the curriculum such as farming. However, it can be seen that there are problems in adopting a purely quantitative or a qualitative approach. It is important therefore to develop an appropriate methodological

approach to this and, after taking into account the factors and criticisms to each approach given above, it is proposed to use both qualitative and quantitative methods in the form of postal questionnaires and semi- structured interviews using cluster samples rather than random samples.

A large scale survey of all primary schools was considered but was not felt to be appropriate because of the resources, including time, available to the researcher. It was considered that a sample survey would be more appropriate and would provide sufficient data for analysis.

The cluster samples, which are identified below, provided samples of groups that were undertaking activities which related to farming, whether from a school or an organisation. By using these samples the author was able to obtain a greater amount of relevant information.

As mentioned above the time and resource factor was important and the final research strategy reflects this as being what was achievable in the time available. It is also for this reason that the results given are based on the written or verbal replies given by the teachers. No observations were carried out in the schools to ascertain what resources were being used, the content of these resources or if they were being used in the way that was originally intended by the authors or publishers. Also to assist the author with the analysis of the results they were all placed on computer and a number of software packages were used including Filemaker Pro.

Research strategy

1. Data collection – This was used to establish the place of farming in the current curriculum, the resources used in the delivery of this topic and the influence of those producing the resources. Two target groups had been identified. These were:

- Organisations with interests which relate to farming and which produce educational materials

- Teachers undertaking a farming study or with an interest in farming

This data collection consisted of:

- **Teachers' Pilot studies** – to establish a base line including reasons why farming is in the curriculum and the use of resources in delivering this part of the curriculum.
- **Questionnaires to resource providers** – to establish their educational aims and activities together with their views on resource provision.
- **Teachers interviews** –to establish the main influences on teachers undertaking a farming project.

Details of data collection

1. Pilot Studies

Teachers' Questionnaires 1994/95

The Royal Highland Show, held in June each year, attracts teachers and parties of schoolchildren. It provides an ideal occasion to ascertain what is happening in schools in relation to farming and to question the teachers on the various aspects of the curriculum that are relevant to this thesis. In 1994 and 1995 questionnaires were devised to achieve this and they contained questions which examined the current situation in schools regarding the implementation of the 5-14 guidelines; the level at which different rural land use was being taught and an indication of the resources being used in teaching these topics; background information on those teaching farming in schools and the teachers opinions as to whether farming should be taught in schools and, if so, why?

Format of Questionnaire

The first part of the questionnaire was aimed at establishing a profile of each of the respondents. Firstly, the type and location of their schools and the age group taught was requested. Secondly, the background of each teacher was sought, to establish if they had any connection with farming or the countryside in general, and also if they had any experience of farming during their training.

The second part of the questionnaire was aimed at establishing at what level farming and other rural land uses were being taught. Also, at what stage was the implementation of the various subjects in the 5-14 Curriculum.

The third part was to find out teacher's views on farming in the curriculum - if it should be taught and why?

Finally, the questionnaire was used to find out about which resources are being used in the teaching of farming and other aspects of rural land use - which organisations and companies were helping with the delivery of the 5-14 curriculum.

Copies of the questionnaires can be found in Appendix 6.1.

Distribution of Questionnaires.

The questionnaires were sent out to all teachers who sent booking forms to the Royal Highland and Agricultural Society of Scotland for class visits to the Royal Highland Show. In addition, in 1994 only, they were handed out to teachers at two locations within the Showground, the Education Centre and the Young Persons Centre; stamped addressed envelopes were provided. The teachers were asked to return the completed questionnaires by mid-July.

The process was repeated again in 1995, although only those teachers who again booked their tickets in advance were contacted by post. The questionnaire remained essentially the same, with the exception of additional information being sought into the training undertaken by the teachers.

The purpose of repeating this was primarily to ascertain progress on the implementation of the 5-14 Guidelines, and to establish if this had resulted in any changes in the use of resources and the reasons for studying farming. The number of responses was slightly lower than in the previous year and, as it was possible that, the

same teachers were being used in the study for the second year, it was decided that it was not necessary to repeat this exercise in future years as sufficient data had been collected for analysis. This data was both quantitative and qualitative in nature, and was analysed using basic statistical techniques to provide percentages and proportional results.

2. Questionnaire to resource providers

The purpose of investigating the educational activities of organisations was to ascertain which ones were producing material which might be related to farming or associated rural topics. It would also provide evidence for the role of farming organisations in curriculum implementation.

A questionnaire was devised and sent out to resource providers which would also establish what resources were available and by what methods they were reaching the schools. This questionnaire can be found in Appendix 6.2.

Sources for questionnaire survey

Two directories were used as the sources of organisations:

i) Who's Who in the Environment Scotland 1996/97[2]

ii) UBI[3] Directory of Teaching Materials from Industry and Commerce 1993/4

Criteria for selection

Both publications gave an indication of the types of organisations and their objectives. Selective samples were chosen from the databases using the following criteria:-

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[2] A Directory of organisations in Scotland which are concerned with the environment at regional and national level. Compiled by the Environment Council, published by Scottish Natural Heritage with financial support from Esso UK plc.

[3] UBI – Understanding British Industry, an organisation sponsored by the Confederation of British Industry (CBI) Education Foundation, with three main aims:

- to improve understanding of industry, commerce and wealth creation among teachers;
- to help teachers to influence school curricula, bringing the lessons taught in school more in line with the needs of adult life;
- to improve understanding of the education system among people in industry and business.

Who's Who in the Environment Scotland - from the information given all records were categorised into:

A - National organisations with educational resources

B- local (ie not covering the whole of Scotland) with educational resources

C - organisations which did not indicate they produced educational resources

D- Former names

E - Generic Names.

Those in categories D and E were eliminated immediately from the study.
Those in categories A and B, except those whose remit clearly did not relate to the rural environment, were chosen for the survey. Another trawl was made of those in category C and those which indicated any educational remit were included. From a total of 284 organisations, 98 were included in the survey.

UBI Directory - This directory lists a total of 282 companies and organisations that produce resource material. Again a selective sample were surveyed using the same questionnaire.

Criteria for selection:

A- National Organisations with a rural land use interest

B- Organisations with a food interest

C- Organisations with a general environmental interest

D- companies with no obvious connections to rural land use

E - local or site specific organisations

F - companies producing general resources

Those in A, B and C were included and a second trawl of those in the other categories revealed a number which related to rural land use and were therefore also included.

The questionnaire contained questions the answers to which would give a clear indication of the following:

i) Educational aims and objectives.
ii) Length of time undertaken on educational work.
iii) Ranking of importance of educational work.
iv) Type of educational work undertaken.
v) Importance of different types of educational work
vi) Resources designed for Scottish schools/5-14 curriculum.
vii) Methods of publicising resources.
viii) Methods of distributing resources
ix) Charges for educational services.
x) Data on Information services.
xi) Responses to RDG13.
xii) Resources available.

A complete list of all the organisations contacted is given in Appendix 6.3

3. Teachers Interviews

Finally, in order to ascertain what was actually happening in schools that had been involved with farming projects, individual semi-structured interviews were undertaken with a small sample of teachers.

The difficulty of finding schools undertaking such a project was overcome by using a sample, the source of which was known to the author through her work. Each year the Scottish Farm and Countryside Educational Trust organised a competition for primary classes (P4 and above, unless composite) on a topic related to farming. The schools were asked to include a least one farm visit while undertaking the project. In 1996-97 this topic was 'The Food We Eat from Scottish Farms'. This thus provided an ideal and easily accessible sample of teachers.

In addition to this, the advantage of using this group was that they were all undertaking the same project and comparison could be made of the different approaches adopted and resources used. For reasons of confidentiality and so that teachers felt able to speak freely, the names of the teachers who took part in the interviews are not given and the schools are identified by number rather than name. A brief description of each school is given in Appendix 6.4.

The rationale for using this sample was that by entering the competition the schools provided a self selected cluster sample. Further, each school had been undertaking the same topic which was related to farming and a comparison of the resources used in each school could be made. Also several schools were within the same education authority and this would allow for a comparison of results to be made within and between authorities. In addition there was a range of ages from P3-7 (some were small composite classes) and a selection of schools from urban, semi-rural and rural schools. The value of this was that not only were the schools of differing sizes but they also represented a wider spectrum as one of the schools was an independent residential school for pupils with special needs.

The format of the interview was that of a semi-structured interview at which the following questions which related to the farming study, were asked:

What resources were used and at which level?

Were they produced for the 5-14 curriculum or adapted for use?

Which type of resource was considered to have greatest educational value?

How did they select the resources?

What influenced their selection - content, quality, cost ?

Where did they obtain the resources/find out information on what was available?

What additional material/resources would have been helpful?

Each teacher was telephoned prior to the interview to firstly ask their permission to meet and secondly to give a brief outline of the purpose of the research and the

interview. All teachers agreed to be interviewed and the interviews took place over a two week period in May 1997. The interviews were recorded on tape, except in two cases where this was not practical because of frequent interruptions from other staff and pupils (the interviews took place during the school day and both were headteachers).

Results and analysis

The results and analysis of the interviews and the results of the questionnaires are given in Chapter Seven and Eight. Chapter Nine contains a summary and conclusions.

Chapter Seven

Farming in the 5-14 Environmental Studies curriculum - results from teachers questionnaires

Introduction

The present day role of resource provision for farming in the curriculum has been the subject of this research. It is a fascinating area of study - as the previous chapters have indicated. This chapter presents the results and analysis of the quantitative and qualitative research undertaken through questionnaires delivered to teachers attending the Royal Highland Show in 1994 and 1995.

Chapter 6 outlined the qualitative and quantitative approaches adopted in this research. This chapter contains the results of the teachers questionnaires together with a detailed discussion. It may be recalled that the research includes:

Two postal questionnaires

One of which was distributed to teachers as part of a pilot study and the results from these which :

- provide an indication of the rate of implementation of the 5-14 Guidelines;
- investigate the background of teachers with an interest in farming;
- identify if any training relating to farming was taking place;
- locate the place of farming and related topics in the curriculum;
- establish why farming is taught and what is important for the pupils to learn about it;
- identify the resources being used and the methods by which the teachers obtain these resources;
- provide an insight into the use of materials from organisation/agencies.

(See Appendix 6.1 for the contents of the questionnaires.)

The results of the above are given in this chapter.

And secondly, one sent to companies and organisations undertaking educational work which:

- identify those organisations undertaking educational work which relates to farming and related topics;
- provide background information on the reasons why the respondents undertake educational work and which aspects they feel are most important/successful;
- note the resources available and whether they are specifically produced for the 5-14 curriculum;
- investigate the methods used to publicise their services and resources;
- identify those organisations that took part in the 5-14 consultation process.

(See Appendix 6.2 for the questionnaire, Appendix 6.3 for the list of organisations/companies contacted)

The third part of this research plan is a series of in-depth interviews with teachers which:

- provide evidence to indicate which members of staff are involved in curriculum planning and topic selection;
- background to how topics are selected and how the curriculum planning takes place;
- locates farming in the 5-14 Environmental studies curriculum plan;
- resources used in a farming project and the main factors which influence their choices;
- the background of the teachers.

The results and discussion for the above are given in Chapter Eight

Results

1. Teachers' questionnaires

The teachers' questionnaires were initially intended as a pilot study to gain data regarding farming and the 5-14 curriculum. The first pilot study was undertaken in June 1994 when questionnaires were distributed to school groups visiting the Royal Highland Show. A similar exercise was repeated in June 1995. At this stage of the research all educational parties[1] were included and, for comparison purposes, they have also been included in the results given below.

In 1994 a total number of 150 questionnaires were produced. Of these:-

68 were sent out to prebooked school/college parties for the Royal Highland Show;

70 were handed out to teachers in the Education Centre[2] and the Young Persons Centre at the Royal Highland Show; 12 were unused.

Thirty three were returned which represents nearly a 20% return rate.

In 1995 the questionnaires were only sent out to pre-booked parties. None were handed out at the Royal Highland Show. Ninety were sent out, of which 23 were returned, representing a slightly higher return rate of 25% but a smaller sample number. The figures given in brackets in the text refer to the corresponding results for 1995.

Response to Pilot Studies

General comments

The overall response to the questionnaire was encouraging and the Royal Highland Show proved to be a useful vehicle for carrying out such an exercise. However, the results from the pilot studies did support the initial statement concerning a perceived

[1] Primary, Secondary, Special schools and Colleges of Further Education

[2] The sites were chosen because the author was responsible for the organisation of both these facilities.

interest by those who took part in farming and rural land use and all the results must bear this fact in mind.

The pilot was repeated in the second year and, despite a higher rate of response, the number of respondents was actually lower. It was also known (through the author's full time work) that many teachers were regular visitors to the Royal Highland Show. This meant that it was possible that the same teachers were responding to the questionnaire.[3] Repeating the process each year would have led to a certain fatigue from the teachers, particularly if the format remained for the most part the same. The responses to most of the questions would also have remained very similar and it would not have been possible to compare the responses to some of the questions as they would not have been from two distinct populations of respondents. The process was therefore not repeated for a third year.

While the number of responses to the questionnaire was reasonably good (over 20%) the results represent a very small sample when compared to the total number of schools in Scotland. This can be illustrated by the fact that the 68 schools who pre-booked for the Royal Highland Show represents less than 2% of the total number of schools (3959 including special units according to the Standard Tables issued by the Scottish Office in 1994). Given that over 52% of all the schools in Scotland are located within an approximate 50mile radius of the Royal Highland Showground, this remains a small number. The reasons for the small sample or conversely, why more schools are not interested in attending a major farming event with a recognised educational content, could be many and varied and it is not possible in this research to provide these answers. However, it is a feature of this section and the subsequent sample used for the teachers' interviews that the numbers are relatively small.

The respondents were asked to indicate which local authority area their school was located in and the results show a spread throughout Scotland with the exception of the areas to the north – Highland, Western Isles, Orkney and Shetland. As might be

[3] No names were requested on the questionnaires so it was not possible to check this.

expected from the location of the Royal Highland Showground, the larger numbers were from Lothian and Strathclyde. This allows for comparisons across the regions to be made, particularly in relation to the rate of implementation of the guidelines. However, it must again be recognised that this is a small sample and provides no more than an indication of what was happening in the schools. The majority of the schools represented in the survey were from urban schools, with only 12% from village schools.

Analysis of respondents

From the results given in both years (1995 results in brackets), it appears that an equal number of primary and secondary school teachers responded to the questionnaires. Although this research is concerned mainly with farming in the primary school curriculum, the results from the secondary schools are useful both as a comparison and for the fact that the 5-14 guidelines are used in S1-2 of the secondary school. They also cover all ranges of levels from P1-S6, with two thirds of the primary teachers teaching upper primary classes. The respondents indicated that two thirds of them taught in schools located in urban areas.

Of the total number of respondents, 6% (0%) were from nursery teachers, 49% (44%)were primary teachers, 42% (48%) secondary teachers and 3% (0%) from colleges of further education (9% were from special schools). Nearly two thirds - 64% (91%)) indicated that they taught in local authority schools, while 27% (4%) failed to respond to this question (Table 7.1). The distribution of the respondents on a regional basis is shown in Table 7.2.

Tables 7.3 and 7.4 show the distribution of the schools in different locations by school types and regions. Of these, 88% (82%) were from urban areas with 55% (48%) from schools located in towns, 33% (34%) from inner cities or suburbs and only 12% (17%) from village schools. In 1994 the two recorded inner city schools came from Tayside and, in Fife, all the schools were located in towns.

Table 7.1 Respondents by type of school

	Nursery		Primary		Secondary		FE – 94 Special - 95		Total	
	94	95	94	95	94	95	94	95	94	95
Local Authority	2 (6%)	0	10 (30%)	9 (39%)	9 (27%)	10 (43%)	0	2 (9%)	21 (64%)	21 (91%)
Independent	0	0	1 (3%)	1 (4%)	1 (3%)	0	0	0	2 (6%)	1 (4%)
Other	0	0	0	0	0	0	1 (3%)	0	1 (3%)	0
Not Given	0	0	5 (15%)	0	4 (12%)	1 (4%)	0	0	9 (27%)	1 (4%)
Total	2 (6%)	0	16 (48%)	10 (43%)	14 (42%)	11 (47%)	1 (3%)	2 (9%)	33 (100%)	23 (100%)

Table 7.2 Distribution of respondents by school type and region

	Nursery		Primary		Secondary		FE/special		Total	
Region/Year	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**
Borders			1	1					1 (3%)	1 (4%)
Central				1	2	2			2 (6%)	3 (13%)
Dumfries and Galloway			1	2	1	1			2 (6%)	3 (13%)
Fife			2	1	2	1			4 (12%)	2 (8%)
Grampian	1		2	1	1				4 (12%)	1 (4%)
Highland									0	0
Lothian			5	4	2				7 (21%)	4 (17%)
Strathclyde	1		5		3	4		2	9 (27%)	6 (26%)
Tayside					2	2	1		3 (9%)	2 (8%)
Western Isles									0	0
Orkney/Shetland									0	0
Other/Not given					1	1			1 (3%)	1 (4%)
Total	2	0	16	10	14	11	1	2	33	23

Table 7.3 Distribution of respondents by type of school and location

	Nursery		Primary		Secondary		FE/special		Total	
	94	95	94	95	94	95	94	95	94	95
Inner city				1	2	2		1	2	4
Suburb			5	1	4	3			9	4
Town	1		9	4	7	6	1	1	18	11
Village	1		2	4	1				4	4
Total	2 (6%)	0	16 (48%)	10 (43%)	14 (42%)	11 (48%)	1 (3%)	2 (9%)	33	23

Table 7.4 Distribution of respondents by location and region

	Inner City		**Suburb**		**Town**		**Village**		**Total**	
	94	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**
Borders			1 (3%)			1 (4%)			1 (3%)	1 (4%)
Central					1 (3%)	3 (13%)	1 (3%)		2 (6%)	3 (13%)
Dumfries and Galloway					1 (3%)	1 (4%)	1 (3%)	2 (9%)	2 (6%)	3 (13%)
Fife					4 (12%)	1 (4%)		1 (4%)	4 (12%)	2 (9%)
Grampian			1 (3%)	1 (4%)	3 (9%)				4 (12%)	1 (4%)
Lothian		1 (4%)	3 (9%)		3 (9%)	2 (9%)	1 (3%)	1 (4%)	7 (21%)	4 (17%)
Strathclyde		3 (13%)	4 (12%)	1 (4%)	4 (12%)	2 (9%)	1 (3%)		9 (27%)	6 (26%)
Tayside	2 (6%)			1 (4%)	1 (3%)	1 (4%)			3 (9%)	2 (9%)
Other/not given				1	1 (3%)				1 (3%)	1 (4%)
Total	2 (6%)	4	9 (27%)	4	18 (54%)	11	4 (12%)	4	33 (100%)	23 (100%)

Table 7.5 Age range of pupils taught by respondents, by school type.

Age range	Nursery/Primary		Secondary		FE		Total	
	94	**95**	**94**	**95**	**94**	**95**	**94**	**95**
3-5	3	2	0	0	0	0	3	2
5-7	4	2	0	0	0	0	4	2
8-12	14	16	3	0	0	0	17	16
13-15	0	0	`14	13	0	0	14	13
16+	0	0	14	11	1	0	15	11
Total	**21**	**20**	**31**	**24**	**1**	**0**	53[4]	44

The teachers were asked to indicate which age groups they taught. Several of them taught in more than one of the age categories shown. The results, therefore, show a total of more than 33. These results are shown in Table 7.5. In the nursery and primary age group 67% (80%) taught pupils in the 8-12 (Upper Primary) age group with the remaining 33% (20%) in the 3-7 (Lower Primary) age group. Of the total of 14 (13) respondents from senior schools all taught pupils from 13 onwards, in 1994 3 were also teaching 12 year olds.

Background: main points

The respondents were in almost equal proportion from primary and secondary schools, with the majority teaching in local authority schools. Most of the local authority areas were represented with the exception of Highland, Orkney and Shetland and Western Isles. Most of the respondents taught in urban schools. Two thirds (four fifths in 1995) of the primary teachers taught at the upper primary level, while the secondary teachers taught across all levels.

Background of Respondents

The teachers were asked to indicate where they live now, where they spent their childhood and in what other areas have they lived in. Table 7.6 gives the results of these questions.

Table 7.6 Respondents current and former home locations.

	Inner City		Suburb		Town		Village		Farm/ Estate		Other		Not given		Total	
	94	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**
Where do you live now?	3	1	8	6	10	8	8	4	3	3	0	1	1	0	33	23
Where did you spend your childhood	4	3	5	5	11	6	12	8	5	3	0	1	0	0	37	26
Which other areas have you lived in?	10	7	7	8	11	6	9	1	4	3	1	0	9	0	51	25
Total	**17**	**11**	**20**	**19**	**32**	**20**	**29**	**13**	**12**	**9**	**1**	**2**	**10**	**0**		

Of their present homes 64% (65%) of the respondents live in an urban location and 33% (30%) lived in a rural location. 54% (54%) had spent some or all of their childhood in an urban area, 46% (46%) had spent some or all of their childhood in a rural area. (Several respondents ticked more than one category.)

Following this line of investigation further, they were asked if they had any close relatives living or working in the countryside. Of the total, a large percentage 73% (57%) had close relatives living in the countryside and, of these, 75% (85%) also worked in the countryside. Table 7.7 provides the figures for the type of employment and it indicates that over two thirds work in farming. This indicates that they may have a personal interest and a background knowledge gained at first hand of farming and rural life. It may also be the reason why they chose to bring their class to the Royal Highland Show.

[4] Some of the respondents taught several different age groups

Table 7.7 Close relations of respondents working and/or living in the countryside

Occupation	1994		1995	
Farming	16	(70%),	8	(67%)
Forestry	2	(8%)	0	
Estate work	3	(12.5%)	3	(25%)
Quarrying	1	(4%)	0	
Other	1	(4%)	1	(8%)

Table 7.8 Respondents experience of farming during training

Question	Yes		No		Not given	
Did you study farming during your teachers training?	94	95	94	95	94	95
	9 (27%)	7 (30%)	23 (70%)	15 (65%)	1 (3%)	1 (4%)

Table 7.9 Teacher training courses undertaken by respondents

College	Course
Bletchley Park Training College, Bucks (1957-	Part of Rural Studies
Jordonhill, Glasgow	- Primary course
Jordonhill, Glasgow	-General Course
Jordonhill, Glasgow	- Cert. Ed. Geography
Leeds University	PGCE Geography
Moray House College Edinburgh	SEC Qualification
No college given -	Geography Degree
Padgate, Warrington	Biology and Rural Studies
Queen Margaret, Edinburgh	Diploma in HEC
St. Andrew's College, Bearsden	B.Ed.Environmental studies in Primary Schools

Table 7.10 Location of farming in training courses undertaken by respondents

Date	College	Course	Unit
88-92	Queen Margaret College	BA Home Economics	Environmental Studies
64-68	Glasgow University	BSc	1st Year Geography
78-79	Jordonhill	Secondary Teachers training	S1 Farming
74-75	Moray House	Cert Sec, Teach.	First year unit 'Farming'
83-86	Aberdeen	Diploma	Geography
68-71	Aberdeen	B.Ed	Study of France Physical geography
89-93	Moray House	B.Ed Primary	Highlands/Lowland study.

The teachers were asked if they had studied farming during their teacher training. The results are given in Table 7.8 and they demonstrate that only 27% (30%) had gained any experience of farming during their teacher training. It also indicates that of those who received any training it mainly took place during the 1960s –1980s. Of the more recently qualified teachers, ie those that undertook training in the 1990s, only two had studied farming during their training.

In 1995 additional detailed about the training were sought, particularly the date of training. Of the 7 (30%) who undertook training with a farming element the results are given in Table 7.9.

In 1995 only 27% of the respondents indicated that they had received any training in teaching farming during their teacher's training. A range of courses were given with the Scottish colleges including geography and environmental studies, and of the two English example given it is more specific as "rural studies" (Table 7.10). This is a reflection of the different paths taken by the two education systems. As noted in Chapter Two, while rural science was briefly part of the curriculum in Scotland, in the secondary departments it was mainly located in geography, agriculture and horticulture. Historically, in England it has been located within Rural Studies, a subject which continues today, although statistics reveal that fewer schools are now offering the subject. In the primary school it has been and remains located within Environmental Studies, a term not used in the National Curriculum of England and Wales.

In the 1994 survey the names of the courses were provided but no dates were asked for. The 1995 questionnaire was modified to ascertain the date the training took place. It is recognised that for some of the respondents, recall might have been less than accurate due to the timescale involved and the individual interest of the teacher in this particular topic. However, only seven of the twenty three responded positively to the question and the results indicate that farming has been part of training for only

in the region of 30% of the teachers, but had been included in various courses spanning the last thirty years. Also from this sample, it would appear that for the secondary teachers training, farming was more likely to be covered as a topic in its own right whereas for the primary teachers it appeared as part of a larger topic such as 'Highlands/Lowlands'.

Summary of main points

Although over two thirds of the respondents now lived in urban areas, just over 50% had spent some of their childhood in a rural area and an even greater percentage (70% and 57% in respective years) had relatives who lived and worked in rural areas. Of those who had undertaking farming as part of the teachers training course, only two indicated that they were specifically farming projects. These were at Moray House and Jordanhill. Given that the population of Scotland who live in urban areas is approximately 98%, the percentage of teachers responding to the survey with the rural background is high and, as visitors to an agricultural show, this could be an indication of their existing interests and knowledge of the countryside.

Teaching Farming and other rural land uses

The teachers were asked if they personally taught about farming and subject areas concerning rural land use in Scotland, UK, Europe or other countries. Of the 33 replies 28 (85%) responded positively [17 out of 23 in 1995 (74%). Table 7.11 shows these results by school type.

One teacher indicated that he/she taught farming, forestry and conservation at P.1 level. Eighty eight percent (70%) of the primary teachers include some aspect of rural land use in their teaching while 86% (82%) of secondary teachers included this in their work. This, however, does not indicate that they all included a topic on farming and, in particular, "farming in Scotland".

Table 7.12 shows the numbers teaching farming and associated rural land use and the geographical extent of these studies.

In 1994, at the Primary level all of the respondents taught "farming in Scotland", with less than half teaching "farming in the U.K." and an even smaller number "in Europe" and "other countries". At the secondary level the number teaching farming in the UK and beyond increases. This indicates the initial use of local ie Scottish environment in the Primary school when the topic is first introduced and the gradual development of the topic in a broader geographical context in at Secondary stages.

The figures in Table 7.13 show the total number of occurrences of teaching farming and other rural land uses, at the different levels.

Table 7.11 Numbers of respondents teaching farming and other rural land uses by school type

Type of School	Yes		No		Total	
	94	95	94	95	94	95*
Nursery	1	0	1	0	2	0
Primary	14	7	2	3	16	10
Secondary	12	9	2	2	14	11
FE College	1	0	0	0	1	0
Special	0	1	0	0	0	1
Total	28	17	5	5	33	22*

*(1 not given)

Table 7.12 Teaching farming and other rural land uses by topic and geographical location

	Scotland		UK		Europe		Other	
Farming – Primary	94	95	94	95	94	95	94	95
	14	14	6	3	2	2	2	10
Secondary	10	10	7	11	5	5	7	7
Food Production –Primary	9	11	6	2	1	2	2	7
Secondary	7	6	3	5	3	2	4	6
Forestry – Primary	7	7	4	4	0	2	2	4
Secondary	7	8	3	5	2	4	2	5
Conservation – Primary	9	9	2	3	0	0	2	2
Secondary	8	13	6	6	3	1	5	6
Other rural land use – Primary	5	7	2	2	1	0	0	0
Secondary	8	11	7	7	3	4	4	4

Table 7.13 Total number of occurrences of teaching farming and other land uses

Primary

Year	1	2	3	4	5	6	7
Totals	3 (1)	2 (1)	4 (1)	18(13)	11(14)	31(28)	25(24)

Secondary

Year	1	2	3	4	5	6
Totals	5 (7)	6 (6)	47 (39)	26 (38)	23 (23)	4 (0)

The results above indicate that overall P4-7 are the most common levels at which rural land uses are taught, with P6 being the most popular. At the secondary level, S3 followed by S4 are the most common.

In previous chapters it has been demonstrated from local authority advice material and examples of other resources that farming can be either undertaken as a topic in its own right or may occur as part of a wider topic, for example, "the food we eat". To obtain information regarding the type of farming or associated topic the teachers were asked if they undertook a number of related rural land uses. The results shown in Appendix 7.1 indicate that, of the rural land uses given on the questionnaire, farming and food production are the most frequently taught at P4 and 5, (P6 in 1995) while forestry, conservation and other rural land uses all occur with a similar frequency in P6 and to a lesser extent in P7. Overall in both years, farming, followed by food production have the highest number of occurrences, followed in 1994 by conservation (38), other land uses (36) and, finally, forestry (28). In 1995 this is reversed – forestry, conservation and finally other land uses.

Farming as a whole was most often taught in P4 (P6) and S3. In the Primary schools Farming in Scotland had the highest number of occurrences-32 (14), with farming in the UK taught in 14 (3) cases and In Europe and elsewhere 8(2) and 9(10) instances respectively.

Food Production recorded a total of 42 (41) occurrences and 20 (17) of these related to production in Scotland, 10 (7) in the UK, 4 (4) in Europe and 8 (13) in other countries. Thirteen (22) primary teachers taught food production and the results are evenly spread from P2-7 (P4-7 with the highest number in P6). In the secondary schools, food production is taught between S1-5.

From the results of the questionnaires it would appear that forestry in Scotland and the UK is taught in P6-7 (P 4-7) and S3-5. There were no recorded instances of forestry in other countries being taught at primary level in 1994, in 1995 six teachers

indicated that they were teaching about forestry in Europe (P6-7) and elsewhere (P4-7)

Conservation, with only 3 exceptions, was recorded as being taught in P6 upwards (11 in primary (14), 7 (24) in secondary). Conservation in Europe was only recorded in 3 (1) instances in S3 -S4, while conservation in other countries was recorded 6 (6) times.

Other rural land uses were taught mainly relating to Scotland from P4 onwards. Only one primary teacher recorded teaching other land uses in Europe (0 in 1995), none recorded teaching this about other areas of the world. The highest occurrence at secondary level was teaching other land uses in Scotland in S3. The incidence of teaching other land use in other countries occurred at S4-6 (S4-5) .

The teachers were asked if they used farming as part of topic work and to give the titles of this topic work. Their detailed responses to both of these questions are given in Appendix 7.2.

It can be seen therefore that the majority of those who responded gave answers relating to food and farming, several in their local area. At the primary level, specific topic titles included "Robbie" using a storyline approach about an imaginary farmer, "Fish and Chips", "feasts and festivals", the Drovers, Charlotte's Web, "Timber", making a nature park. At the secondary level, the responses concentrated on rural land uses and the environment and on the economics of farming.

However, the above results indicate that there is no coherent approach to teaching farming as a topic, it could be undertaken at any level without necessarily any follow- up work at a later date. It could be undertaken as part of another topic. It all appears to be dependent on the choices made by the individuals schools and teachers.

Locating farming in the curriculum

The majority of the respondents were teaching farming or related rural land use topics in the schools and a detailed analysis of their responses revealed that 'Farming in Scotland' was the topic most usually covered, with other topics 'Food production', 'Conservation' and 'Forestry' having a slightly lower but similar number of occurrences. These occurrences show a gradual decline as the topics were studied over wider geographical areas – UK and Europe but the numbers increased slightly to cover other areas of the world. This reflects the lists of topics given in the 1980s by COPE/SCES (see Chapter Three for details) where, for example, a local farm study appears under 'Our Neighbourhood' a Scottish Farm Study under 'Our Homeland' and World Farm/ Farming in other lands under 'the Wider World'. The later list of topics undertaken in the Borders (See Chapter 5) suggests that a study of Europe is a popular topic and, although there is no indication that farming occurs here, it is likely that it occurs in relation to landuse and food.

A more detailed analysis reveals that P6 and S3 were shown to be the years when farming and associated rural land uses were most frequently taught; P4 and 7 and S4-5 also had a high incidence of teaching these topics. For these results from the primary sector, this represents a slight deviation from the suggested level for teaching farming in both the national and local education authority examples given in Chapter Five. For example Lothian guidelines suggests farming studies in P4/5, HMI case studies P5, SCES examples P5, Moray House P7. But as has been demonstrated individual schools and class teachers had, at that time, a greater autonomy over their curriculum and topic plans. This figure could also have been distorted by the 'visit' factor which should not be discounted – the sample of teachers might be taken from those teaching upper primary where a visit to a major event such as the Royal Highland Show is considered to be more suitable (and more easily managed) by older pupils. Again, this points towards teachers' autonomy.

The later examples given in Appendix 5.7 and 5.8 relating to farming in the 5-14 curriculum- Harthill Primary School (level C –p4-6), the BEEF survey in the Scottish Borders and the Farm Links research, indicate that farming tends to take place mainly between P3-5.

When asked about topic work there was no clear picture given of topics used. All the results indicated a variety of approaches to this. At the Primary level while 'Food and Farming' and 'Farming in their local area' were most frequently mentioned, others had adopted a storyline approach such as Charlottes Web or topics such as 'Fish and Chips', 'Robbie', Autumn and Winter' and 'Feasts and Festivals'.

The majority of respondents felt that farming should be taught and at both primary and secondary the main reason for this was to learn about food production followed by a knowledge of the pupils Scottish heritage. The most important feature of farming which should be taught appeared to be about farming systems, closely followed by care of the land and economics. However, although farming does appear to be featured as part of the curriculum in most of the schools in this sample, there does not appear to be a comprehensive approach either as to why it should be taught or how it is taught or even where it is located in the curriculum of any given school.

The next question was aimed at finding out what progress had been made on the implementation of the 5-14 Guidelines within the schools. Table 7.14 shows these results.

Table 7.14 Implementation of the 5-14 Guidelines in Primary Schools by subject and region

Subject	EL		Ga		La		ML		Ma		ES		Ea		R &M		P & S	
Region	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**	**94**	**95**
Borders	1	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0
Central	0	1	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1
Dumfries And Galloway	1	2	0	0	0	0	0	0	1	2	0	0	0	1	0	2	0	0
Fife	2	1	0	0	0	0	1	0	2	1	1	1	1	0	2	0	1	0
Grampian	2	1	0	0	0	0	0	0	2	1	1	1	1	1	2	1	1	1
Lothian	5	4	0	0	0	0	0	0	5	4	1	4	1	2	2	2	1	2
Strathclyde	6	0	0	0	0	0	0	0	4	0	4	0	4	0	1	0	2	0
Tayside	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0
Total	17	10	0	0	0	0	1	0	15	10	7	8	7	5	7	6	5	4
% of Total in sample	**100**	**100**	**0**	**0**	**0**	**0**	**6**	**0**	**88**	**100**	**41**	**80**	**41**	**50**	**41**	**60**	**50**	**40**

EL -English Language Ga - Gaelic La - Latin ML- Modern Languages

Ma- Mathematics ES - Environmental Studies Ea - Expressive Arts

R&M - Religious and Moral Education P&S - Personal and Social Development

Highland, Western Isles, Orkney and Shetland are not included as no responses were received (or possibly not even given due to the distance from the Royal Highland Showground) from teachers in these areas.

At the time that these questionnaires were undertaken, the overall picture given of the stages of implementation of the 5-14 Curriculum Guidelines was that most regions had introduced English Language and Mathematics, the other curriculum areas had been introduced in several of the regions, except for Gaelic, Latin and Modern Languages. The introduction of Environmental Studies was less advanced.

In 1994 Fife, Grampian, Lothian and Strathclyde would appear to have implemented more guidelines at both primary and secondary levels. Of the remaining regions shown in Table 7.14 only English Language and Mathematics guidelines had so far been introduced in the schools. By 1995 the percentage of schools introducing the 5-14 guidelines had increased, particularly in relation to Environmental Studies.

In response to the question asking 'under which curriculum areas will farming be taught', of those who knew, at the secondary level 100% indicated that it would be Environmental Studies. At the primary level, Environmental Studies was most frequently mentioned - 16 (7) but several respondents mentioned English Language - 4, Mathematics- 5, Expressive Arts-2, Personal and Social Developments-1, Religious and Moral Education-1 (1) and one respondent in both years indicated that farming could be taught under all curriculum areas. Again this indicates that while farming may be seen as a cross-curricular theme, there is a lack of coherence as to where it is located in the curriculum.

In the 1995 questionnaire the teachers were asked if they had received any guidance on the implementation of the guidelines from the SOED, SCCC or their regional advisory service. Of those that replied only one indicated that they had received guidance material and this was from the regional advisory service. They did however note that they had received guidance from organisations including a local ranger service, an agricultural college, SNH and the Forestry Commission.

Finally in this section, the teachers were asked two questions, did they think that farming should be taught and if the answer was 'yes' to give their reasons. Secondly, what did they think were the most important features that pupils should learn about farming. All the respondents from the nursery, primary and further education sectors felt that it should be taught. Only one of the secondary teachers did not respond positively to this question and did not complete it. This was a Home Economics teacher from a suburb of Strathclyde who did not personally teach farming.

The individual responses to these questions are given in Appendices 7.2. Examples are:

> 'So that children can appreciate what is involved in the production of various foods.'

> 'Its part of our natural heritage, part of Scottish culture, part of our scenery; show food does not come instantly of a shelf.'

In summary, the respondents felt that farming should be taught to help pupils to gain an understanding and awareness of the (rural) environment and their place in it, as well as being the source of their food. A more detailed analysis of the responses is given in Table 7.15 and this indicates that how food is produced and a knowledge of the local environment are considered to be of most importance.

Table 7.15 Ranking the reasons why farming should be in the curriculum

	Primary	Secondary
How food is produced	1=	1
The local environment	1=	4=
Conservation	3=	4=
Understanding and appreciation of the countryside	2=	3=
Implications on their own lives	3=	4=
Heritage	2=	2
Economics	2=	3=
Rural life/landuse	4	3=

On the issue of what teachers considered the most important features about farming, especially in relation to their pupils learning, it was seen that the responses fell into

two broad groups. Firstly, the economic and practical side of farming and food production. Secondly, the care and conservation of the rural environment. For example ,

> 'Farming is an industry. The factors which affect farming in an area. Farming and the environment.'
>
> 'Education to make informed and balanced assessment and decisions of food to eat etc..'
>
> 'Appreciation and understanding of the countryside and, hopefully, enjoyment from it.'

Further details are shown in Appendix 7.2.

Table 7.16 Most important facts about farming in the curriculum

	Primary	Secondary
Farming systems	1	1
Farmer's job/life	3	
Rural Activities/Landuse	4=	5
Appreciation/Understanding	5=	
Food production	4=	3
Care of Land	2	4
Economics	5=	2

From the above it would appear that there is no real agreement as to the main reason why farming should be taught or what is the most important thing that should be taught. This supports the view expressed, as noted in Chapter Four, by Apple (1993) that the final selection will never be value free and by Lawton (1988) that

> 'every statement a teacher makes in the classroom is value–laden, connected with ideas about the purpose of education, probably connected with the more general values and beliefs, and maybe with the purpose of life'(Lawton, 1988:3).

Resources used in teaching farming

The teachers were asked next about the resources that they used for farming projects, how they heard about these resources, and to indicate on a given list of organisations

if they used their resources. Of the 33 responses in 1994, 1 primary teacher and 4 secondary teachers did not teach farming. The results below are for the remaining 28. Table 7.17 shows that at Primary level the teachers own resources are most frequently used resources, while at secondary level text books and videos are the most commonly used resources. Audio visual and computer programs appear to be used least frequently at both levels.

When asked to indicate the main resources used and the level of the pupils using them many of the teachers failed to respond and one indicated that there were too many to mention. The complete results are shown in Appendix 7.3., some specific examples are given in the list below.

Primary	**Resource**	**Level Used**
	Lanark Mart	
	Never Rest (video)	C
	HSE topic packs	C
	RSPB - farm conservation	C
	Charlotte's Web -E B White	P4
	Landmarks (BBC video)	C/D
	Earthwatch (video)	
Secondary		
	"Our Landscapes" (Oliver and Boyd)	S1-S2
	Key Geography "Connections"	S3-S4
	Europe (Waugh)	
	World (Waugh)	
	The British Isles" (Waugh)	S Grade(Gen/Credit)
	"Studies in Geography" (Broadley and Goring)	(Foundation)
	The Human Environment (Clarke)	(F/G/C)
	"	"

Other comments were of a more general nature, for example:

> 'Facilities in the local area for "hands on" experience backed up by material from posters, books, videos (school broadcasts in the past have been very good - but emphasis seems to be narrowing),computer programs etc.'

It was of particular interest to note that there were no specific resources referred to on more than one or two occasions, and most of the responses were of a very general

nature e.g. textbooks, videos. This indicates both the variety of resources available and the individual teacher's ability to select from those available.

The teachers were asked where they obtained their resources. The results are shown in Table 7.18. At primary level all three sources were significant but at secondary level the use of resource centres was considerably less.

When asked where they obtained information regarding new resources, colleagues 72% (58) and newspapers/magazines 56% (50) were the main sources at primary level, although in 1995 direct mailing appeared most frequently (Table 7.19). At secondary level newspaper and magazines 67% were again the most popular with colleagues 33% falling behind other media 40%. Again, in 1995, direct mailing was the most frequent entry. In both years Directories and Advisory Services appeared to be the least likely source of information at both levels.

Finally, the teachers were asked if they had ever used resources from a list of resource providers. The full results are shown in Table 7.20.

Table 7.17 Types of resources used in teaching farming

Type	Primary				Secondary				Total			
	94		95		94		95		94		95	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Text books	11	65	7	58	10	91	7	64	21	72	14	61
Education packs	13	76	7	58	5	45	3	27	18	62	10	43
Own Resources	16	94	10	83	4	36	7	64	20	69	17	74
Audio visual	6	35	5	42	2	18	5	45	10	35	10	43
Computer programs	5	29	3	25	3	27	1	9	8	28	4	17
Videos	11	65	9	75	9	82	9	82	20	69	18	78
TV Programmes	11	65	7	58	3	27	5	45	14	48	12	52
Other*	3	18	1	8	1	9	0	0	4	14	1	4

*other related to field trips – farm visits etc.
[% of total number of schools responding to this question 17 primary 11 secondary (12 primaries inc special, 11secondary)]

Table 7.18 Sources of new resources

Type	Primary				Secondary				Total			
	94		95		94		95		94		95	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Own school resources	15	83	8	66	10	67	7	63	25	76	15	65
Resource Centres	13	72	8	66	3	20	2	18	16	48	10	43
Own personal resources	15	83	9	75	5	33	6	55	20	61	15	65

Table 7.19 Sources of information about new resources

Type	Primary				Secondary				Total			
	94		95		94		95		94		95	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Resource Centres	8	44	7	58	3	20	2	18	11	33	9	39
Advisory Service	3	17	1	8	2	13	3	27	5	15	4	17
Newspapers/magazines	10	56	6	50	10	67	4	36	20	61	10	43
Other media	7	39	2	16	6	40	3	27	13	39	5	22
Directories of resources	3	17	2	16	3	20	1	9	6	18	3	13
Direct Mailing	3	17	6	60	5	33	6	55	8	24	12	52
Staff Room	8	44	4	33	0	0	1	9	8	24	5	22
Colleagues	13	72	7	58	5	33	5	45	18	54	12	52

Table 7.20 Organisations from whom teachers sought resources

Organisation	Primary				Secondary				Total			
	94		95		94		95		94		95	
	No	%	No	%	No	%	No	%	No	%	No	%
British Agrochemical Association	2	11	1	9	2	13	0	0	4	12	1	5
British Chicken Information Service	4	22	1	9	2	13	2	20	6	18	3	14
British Egg Information Council	7	39	5	45	5	33	3	30	12	36	8	38
British Nutrition Foundation	4	22	0	0	3	20	2	20	7	21	2	10
British Wool Marketing Board	8	44	5	45	3	20	3	30	11	33	8	38
Countryside Commission for Scotland	10	56	7	64	6	40	6	60	16	48	13	62
Fertilizer Manufacturers Association	0	0	0	0	1	7	0	0	1	3	0	0
Food and Farming Information Service	5	28	4	36	2	13	1	10	7	21	5	24
Food From Britain	5	28	0	0	1	7	2	2	6	18	2	10
Forestry Commission	9	50	10	91	9	60	5	50	18	54	15	70
Highlands and Islands Enterprise	1	6	0	0	4	27	3	30	5	15	3	14
Meat and Livestock Commission	5	28	4	36	4	27	3	30	9	27	7	33
Milk Marketing Board	17	94	9	82	8	53	5	50	25	75	14	66
National Farmers' Union of Scotland	2	11	0	0	1	7	1	10	3	9	1	5
National Trust for Scotland	9	50	6	55	5	33	3	30	14	42	9	43
Nature Conservancy Council	2	11	2	18	5	33	3	30	7	21	5	24
Potato Marketing Board	12	67	7	64	6	40	3	30	18	55	10	48
RSPB	10	56	7	64	4	27	2	20	14	42	9	43
Scottish Association of Agriculture	4	22	2	18	5	33	1	10	9	27	3	14
Scottish Natural Heritage	2	11	7	64	3	20	3	30	5	15	10	43
Soil Association	0	0	1	9	2	13	0	0	2	6	1	5
SSPCA	6	33	6	55	0	0	0	0	6	15	6	29
Vegetarian Society	0	0	0	0	3	20	2	20	3	9	2	10
None of Above	1	6	0	0	4	27	0	0	5	15	0	0
Other	0	0	0	0	2	13	0	0	2	6	0	0

Table 7.21 Comparison of results by most used resources 1994-95

Organisation	94 No.	94 %
Milk Marketing Board	17	94
Potato Marketing Board	12	67
Countryside Commission for Scotland	10	56
RSPB	10	56
Forestry Commission	9	50
National Trust for Scotland	9	50
British Wool Marketing Board	8	44
British Egg Information Council	7	39
SSPCA	6	33
Food and Farming Information Service	5	28
Food From Britain	5	28
Meat and Livestock Commission	5	28
British Chicken Information Service	4	22
British Nutrition Foundation	4	22
Scottish Association of Agriculture	4	22
British Agrochemical Association	2	11
National Farmers' Union of Scotland	2	11
Nature Conservancy Council	2	11
Scottish Natural Heritage	2	11
Highlands and Islands Enterprise	1	6
None of Above	1	6
Fertilizer Manufacturers Association	0	0
Soil Association	0	0
Vegetarian Society	0	0
Other	0	0

Organisation	95 No	95 %
Forestry Commission	10	91
Milk Marketing Board	9	82
Countryside Commission for Scotland	7	64
Potato Marketing Board	7	64
RSPB	7	64
Scottish Natural Heritage	7	64
National Trust for Scotland	6	55
SSPCA	6	55
British Egg Information Council	5	45
British Wool Marketing Board	5	45
Food and Farming Information Service	4	36
Meat and Livestock Commission	4	36
Nature Conservancy Council	2	18
Scottish Association of Agriculture	2	18
British Agrochemical Association	1	9
British Chicken Information Service	1	9
Soil Association	1	9
British Nutrition Foundation	0	0
Fertilizer Manufacturers Association	0	0
Food From Britain	0	0
Highlands and Islands Enterprise	0	0
National Farmers' Union of Scotland	0	0
Vegetarian Society	0	0
None of Above	0	0
Other	0	0

The above list of organisations was selected by the author from her own knowledge of the farming, food and countryside organisations. A more comprehensive survey of resource providers was carried out and the results of the survey are contained in the next section.

The figures representing the resources used from outside organisation clearly indicated which were the most popular sources. These were (in order of most often used) the Milk Marketing Boards (there were three in Scotland at the time of the first survey), the Potato Marketing Board, the Forestry Commission, Countryside Commission for Scotland, National Trust for Scotland and RSPB.

However, as from November 1994 the Milk Marketing Boards were no longer in existence, shortly after this date the Potato Marketing Board underwent many

changes and reduced considerably its educational work. The Countryside Commission for Scotland no longer exists following its incorporation into Scottish Natural Heritage along with Nature Conservancy Council, and the Forestry Commission has been divided into the Forest Authority and Forest Enterprise. All of these changes were made as a result of decisions taken by the then Conservative government, they did not come from within the agricultural or conservation sectors. Those directly related to farming were forced to become companies and/or co-operatives with profits as the main motives. Education, as such did not initially feature in this commercial environment although as will be seen in the following paragraphs the National Dairy Council has recently developed a range of new educational resources. Both Scottish Natural Heritage and the Forestry Authority/Enterprise continued with educational work.

Of the other organisations directly linked to farming, it is the promotional bodies such as the British Egg Information Council, the British Wool Marketing Board and the Meat and Livestock Commission which feature towards the top of this table. These organisations were able to offer a variety of (often glossy) educational resources including leaflets and posters. It is interesting to note that these are British rather than Scottish organisations and as such produce educational materials aimed mainly at the National Curriculum.

Chapter Eight

Results and discussion from resource providers questionnaire and interviews with teachers

Introduction

Following the pilot projects, a detailed survey of resource providers was carried out. Using the selection process outlined in the methodology section (Chapter 6) from both the UBI Directory and Who's Who in the Environment, a total of 262 questionnaires were sent out in 1996.(See Appendix 6.3 for complete list.) One hundred and thirty four replies were received. There was no response from 125, a further 3 were returned as the company/organisation was no longer at the address given. Of the sample of 259 the return rate was 51.74%.

Not all those that responded felt that they had any connection with farming and associated land uses, although some of these did fill in the questionnaires. The results from these were not used in the final analysis.

Significantly, two organisations identified in the previous list did not complete the questionnaires as they did not feel that it was appropriate, although they sent a list of resources. These were the Meat and Livestock Commission and the National Dairy Council. The latter has taken over the educational work of the Milk Marketing Boards and responded as follows:

> 'Up until 1995 the NDC was only responsible for representing organisations within England and Wales only, Scotland was managed by the regional Milk Marketing Boards. Since the demise of the regional MMB office in Scotland we are now taking enquiries from Scottish schools...'

Several of the larger commercial companies returned the questionnaires uncompleted together with a letter saying that they were unable to complete it due to confidentiality/competition, for example,

> 'We looked carefully at your questionnaire but regret that we do not feel able to participate in your survey. This is because the ground covered is in areas

which, for competitive reasons, we regard as confidential, even where the information concerned is being sought in confidence.' Procter and Gamble Ltd

Others were unable to respond because of company policy:

'BP receives hundreds of questionnaires each year and it is not possible to devote time that would be required to respond to them individually, therefore it is our policy not to complete them.' BP (Sent resource catalogues.)

'I do realise that this does not answer your specific request, however due to the size and complexity of the company and the number of products that we sell, we are unable to answer questionnaires or to research specific information and we do not have a pack which fulfils your request.' J Sainsbury PLC

The final list of organisations which considered that they had an interest in farming, food production and other related rural land uses was as follows:

Advocates for Animals	Association for the Protection of Rural Scotland
Animal Concern	Association of Science Education
Association for the Protection of Rural Scotland	BBC Education
Association of Scottish Shellfish Growers	Botanical Society of the British Isles (Scotland)
Biotechnology and Biological Sciences Research Council	British Association for Shooting and Conservation
British Agrochemicals Association	British Wind Energy Association, Scottish Branch
British Deer Society - Scottish Office	Cairngorms Partnership ~The
Buchan Countryside Group	Christian Aid
Channel Four Schools Service	Earthward
Crystal Presentations Ltd (DuPont Conoco Services to Education)	Fertiliser Manufacturers Association
Edinburgh Green Belt Trust	Forestry Commission
Food and Farming Information Service	Mountaineering Council of Scotland ~The
Grounds for Learning Partnership	New Lanark Conservation Trust
National Rivers Authority – South Western Region	Northern Studies Centre
NIREX	Railway Development Society (Scotland)
One World Centre	Royal Commission on the Ancient and Historical Monuments of Scotland
Reforesting Scotland	Royal Institution of Chartered Surveyors in Scotland
Royal Incorporation of Architects in Scotland	Scottish Environmental Education Council
Royal Society for the Protection of Birds – Scottish Headquarters	Scottish Wildlife Trust
Scottish Natural Heritage	SFACET
Severn Trent Water	SSPCA
Shetland Amenity Trust	Traidcraft PLC
The Environment Agency(National Rivers Authority - South Western Region)	Wildfowl and Wetlands Trust – Caerlaverock
Wemyss Environmental Education Centre.	WWF Scotland
Woodland Trust ~The	
Zeneca Agrochemicals	

General observations on response to questionnaire

The response rate to this questionnaire was good and most organisations were happy to provide more information and many sent copies of resources and/or annual reports.

However, the selection processes eliminated the main Scottish farming organisations, the National Farmers Union of Scotland, Royal Highland and Agricultural Society of Scotland and the Scottish Landowners Federation, none of which produced educational resources. The references made to the National Farmers Union of

Scotland's resources in the previous chapters refer to an initiative undertaken in the late 1980s, 'Farming in Scotland A Story Worth Knowing' which, as has been demonstrated elsewhere for example in the PEDP, was well received by the schools. This project was not completed as events overtook it (and financial resources redirected). These were the Glasgow Garden Festival (1988) and British Food and Farming Year (1989). Following this, the Scottish Association of Agriculture undertook the main educational work for the three organisations.

Other organisations such as the Meat and Livestock Commission (MLC), as noted earlier, did not complete the questionnaire but commented that rural land use was only a very small part of their work.[1] Similarly the British Egg Information Council whose aim was to provide a range of educational literature for schools and the general public on all aspects of the egg industry... did not consider that their educational work included reference to rural land use. The National Dairy Council responded with a letter and copies of their resources but they did not feel in a position to complete the questionnaire as they had only recently (letter dated October 1996) started to take enquiries from Scottish organisations and their resources were based on the National Curriculum system in England and Wales. No responses at all were received from the British Wool Marketing Board or the Potato Marketing Board.

From the pilot studies, resources from all the above organisations were used in connection with farming projects. The teachers, if not the organisations, linked food and farming in their projects and 'How Food is produced' was the most frequent answer response to the question on why farming should be taught. The above responses also provide an indication that English based organisations were aware of the curricula differences although not the extent to which their resources could be

[1] The MLC considered that the major part of their education service were resources linked to Food Technology and Business Curricula ie rural land use was not relevant in these areas. However, copies of the resources that they sent with the questionnaire, particularly the teachers newsletter issue No 1 'Learning through Food' which consists almost entirely of articles on how teachers can plan farm visits and a directory of farming related resources.

used in the 5-14 curriculum. The Meat and Livestock newsletter did indicate that it was useful for 5-14 Environmental Studies.

An analysis of those who responded to the question on whether their educational work involved rural land use revealed that 60% were charities, mainly relating to conservation and animal welfare. Of these only two, the Food and Farming Information Service and the Scottish Farm and Countryside Educational Trust were mainly concerned with farming. Another 14% were trade organisations with a similar percentage of government agencies. The remainder were television companies (2) – Channel Four and BBC Education, and commercial companies (4). Of the seven trade associations, agrochemicals and fertilizers were represented along with shellfish growers, architects and surveyors. The agrochemical and fertilizer associations represent the major chemical industries and Zeneca Agrochemicals and DuPont Conoco Education Service were two of the commercial companies that responded.. These industries have a history of providing education services, for example, Shell and BP, and their catalogues reveal a large number of resources some of which are relevant to this research. It remains to be seen what type of responses would have been received from food related companies and supermarkets, who, if they responded could not complete the questionnaire because of confidentiality or the fact that they received too many similar requests each year to be able to respond.

The questionnaire was divided into a number of sections. Firstly the companies/organisations were asked to state their educational aims and objectives. Their responses are shown in Appendix 8.1. Analysis of the themes of the educational aims and objectives of the respondents reveals that the majority undertake educational work in order for the pupils 'to develop an understanding of...' whatever cause or activity the specific organisation undertakes. This is usually in the hope of influencing future decisions and several actually refer to this 'influence' directly. Others wanted to 'inform and educate', simply 'promote their work' or provide opportunities and involvement. Only the two television companies gave relatively neutral responses – to provide a wide range of education resources and broadcasts.

The next question was devised to ascertain how long each organisation/company had been undertaking educational work It appears from this that there has been a significant increase in the numbers undertaking educational work within the last 5 years (1991 onwards). From those that responded to this question over 36% were in this category.

Table 8.1 Length of time organisations/companies involved in educational work

Years	Number
0-5	13
6-10	4
11-15	6
16-20	4
21-25	2
26-30	2
30+	5
Not given	13

The respondents were then asked how their organisation ranked in importance the educational work that they undertook and from the table below it can be seen that the majority ranked this type of work either very highly or highly.

Table 8.2 Ranking the importance of educational work

Very Highly	Highly	Moderately	Fairly Low	Low	Not given
17	**10**	**8**	**4**	**1**	**9**

In order to establish the type of educational work that was being carried out a list of different activities was provided for them to tick. From the results shown in Table 8.3, the production of resource materials was the most frequent type of work being undertaken.

Table 8.3 Type of educational activities undertaken by organisations/companies

Production of resources	39
Operating a speaker service	31
Contacts with colleges of education	28
Site visits/organisation of visits	25
In- service training	23
Other	20
Production of curriculum guidelines for teachers	11
Operating a residential centre	4

Of the list provided they were asked to state which educational activity was given the most emphasis and again the production of resources was the highest ranked.

Table 8.4 Type of work given most emphasis to achieve educational aims?

Production of resources	19
Site visits/organisation of visits	7
In- service training	2
Contacts with colleges of education	2
Operating a speaker service	4
Operating a residential centre	0
Production of curriculum guidelines for teachers	0
Other	12

The respondents to the questionnaire given in the list above consist of mainly Scottish bodies, Scottish branches of UK bodies and UK organisations with only a few whose interests mainly lie elsewhere in the UK. They were all asked if they produced resources for Scottish schools. The results show that most of the respondents considered that they were providing resources specifically for Scottish schools and the 5-14 Programme.

Table 8.5 Production of resources for Scottish schools

Target for resources	
Production of resources for Scottish schools	15
5-14 curriculum	23
National curriculum and Scottish curriculum	10
National Curriculum with guidelines for Scottish teachers	6
Not curricula related	9

In order to get their resources into schools it is necessary to undertake some form of publicity. The organisations were asked to give an indication of the publicity methods that they employed. Twenty two used Direct Mailing to schools and the same number used Direct Mailing to named individuals. Eighteen responded that they used educational publications. The following were the ones mentioned (the numbers refer to the number of times each publication is mentioned).

Times Educational Supplement (TES) (6)
Review SCCC (4)
SNH Magazine (2) Own newsletter (2) Junior Education (2)
Others (1)– Grampian Environment Matters, Local Papers, Lothian Reef[2] Directory, UBI Directory of Teaching Materials from business, British Tourist Authority school visits guide, Landmark press school visits guide, The Guardian,
Leaflets, internet, publications on archaeology,
SCCC curriculum file, own catalogue, BAA[3] resources guide for schools
Wildlife trust magazine, other EE publications, REEF directories

Other means of publicity employed by the respondents are given in Table 8.6

Table 8.6 Publicity employed by respondents

Shows/country fairs	3
Word of mouth	3
Website	2
Respond to enquiries	2
Education officer service	2
Educational show	2
Education contacts	2
Personal contact	2
EBPs[4]	2
Conferences	2
Visits	2
Talks	1
FFIS[5]	1
Community events	1
Presentations at career events	1
SNH news	1
Own mailing list	1
SATRO[6]	1
Development education centre	1

[2] REEF – Regional Environmental Education Forum
[3] BAA – British Agrochemicals Association
[4] Education Business Partnerships
[5] Food and Farming Information Service
[6] SATRO –teachers' organisation

This indicates that a variety of publications and other means are used to publicise education material. They were next asked what they thought was the most effective means of publicity and direct mailing was considered to be the best option.

Again a variety of opinions were given which ranged from:-

Direct mailing to individual		10
All		4
SCCC curriculum file		3
Personal contacts		2
Others -1:	shows	
	FFIS	
	Mailing to schools	
	Publications catalogue	
	SNH newspaper	
	Networks	
	Outreach programme	
	Word of mouth	
	Unsolicited mail	
	Development education centres	

One might note that there is no apparent cohesive approach to this although several mentioned the use of the SCCC Curriculum File, already noted in Chapter Five.

When asked how their educational material was distributed it was again direct mailing which was the favoured option, either to individuals, schools or centrally through the local education authorities internal mailing systems, as the results below indicate.

Direct mailing to individuals	29
Direct mailing to schools	16
Education Departments	13
In response to requests	9
Mail order list	2
Shows/country fairs	1
Direct contact with teachers	
FFIS	
SCCC curriculum file	
Exhibitions	
Events	
Visits	
Outreach programme	
Catalogue	
SEDC[7]	
Teacher centres	

[7] SEDC- Scottish Educational Development Centre

Again they were asked to give which they considered to be the most effective. The results are given below.

Named individuals		8
Personal contact		3
Direct mailing to schools		3
Education departments		2
Other:	school clubs	
	FFIS	
	SCCC curriculum file	
	Training workshop	
	Own catalogue	

Finally, in this section they were asked if they made any charges for educational services. Of those that responded to this question 15 indicated that no charges were made for their services. Of those that did make charges most of these (5) were for activities linked to in-service training. Other charges were made for publications, visits by pupils and an annual subscription fee. It is interesting to note that several organisations indicated that they were reviewing their non-charging policy.

The above has dealt with the companies being proactive in the production of resources and contacting the schools. There is another aspect that must also be considered and that is the schools contacting the companies and organisations for education materials and activities. The next section therefore deals with the provision of Information Services

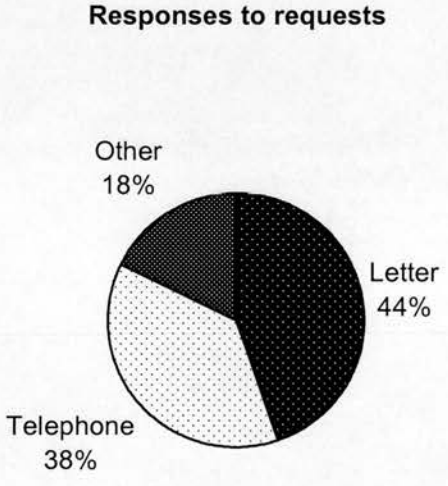
Thirty seven of the respondents indicated that they operated an information service, only three did not (6 did not respond to this)

The kinds of requests they received were many and varied and included:

Leaflets
Factsheets
Information about services offered
Individual requests
Resource packs
Magazines/newsletters
Curriculum-linked ideas
Funding
Videos,
Posters
Lists of contacts/references

They responded to requests by letter, telephone and others means (not specified) and the relative percentages are shown on the pie chart below:

Chart 8.1



The scale of requests received also varied with some of the organisation receiving over 1000 a year. Table 8.7 below shows the range of numbers of requests received.

Table 8.7 Numbers of requests received by companies/organisations per year

No of requests	0-99	100-199	200-499	500-999	1000+
No of Organisations	7	4	10	4	12

The source of these requests, in order of number received, is shown in Table 8.8 below.

Table 8.8 Source of requests

Secondary Pupils	Teachers	University students	FE students	Primary Pupils	Trainee teachers	Others
1	2	3	4	5	6	7

Others: overseas, librarians, parents, public, parent teachers associations/community groups

Finally, the respondents were asked if they had responded to Working Paper 13 on Environmental Studies. Only 8 replied positively and these were:

RSPB	
SEEC	
SSPCA	
SNH	
New Lanark Trust	– via SEEC/Lanark REEF
One World Centre	through SFDES (Scottish Forum
WWF	on Development Education in
Christain Aid	schools)

Summary of educational activities

The relatively recent realisation by some organisations that education and educational resources are a means of influencing both young people and teachers is shown by the results of the question which asked 'how long have you been undertaking educational work'. It transpired that over one third had started their educational work in the last 5 years and nearly 50% in the last ten years. Although both curricula in England and Scotland were relatively new when this survey was undertaken, these results imply that these new curricula had not created any obstacles and, in fact, could have helped.

The majority ranked their educational work either very highly or highly. Of these organisations over 30% had started their educational work in the last 10 years, rising to 65% over the last 20 years. Three quarters of those who ranked their educational work to be of moderate importance had started their educational work in the previous ten years. Only four organisations rated their educational work to be of fairly low or low importance. These figures again support the view that there has been a recognition amongst the organisation surveyed that it is possible to use the curriculum as a way of drawing certain specific themes to the attention of children and their teachers and, hence, as a means of gaining influence.

The above relates to educational work in general. The aim of the next questions were to ascertain both the range of activities and what was felt to be most effective. Nearly 80% were producing resource materials and over 60% were providing a speaker

service. Fifty Six percent had contacts with the teacher training colleges with sites visits and in-service training being undertaken by nearly half of the organisations.

Apart from the small number (4) involved with running residential centres, the least popular type of educational work was the production of educational guidelines for teachers.

Of all these different types of educational activities, most emphasis was given to the production of resources. The very nature of these types of materials mean that they can be produced in large number and distributed to all schools. Once completed they do not involve a large amount of staff time and can remain in the schools for many years. How often these resources are used would require further research outwith the remit of this work. However, this emphasis on resource materials can be seen to tie in closely with the use of materials given in the pilot surveys. While the teachers own resources were most often used in the Primary sector, education packs were the second most often type of resources used. Their use was augmented by videos and TV programmes but audiovisual and computer programs were not often used. The increase in the use and availability of computers in classrooms since this research was undertaken may have changed this situation somewhat.

Of the resources being produced, it is interesting to note that twenty three organisations indicated that they were producing resources specifically for the 5-14 Programme. As the majority of the respondents represented Scottish bodies or Scottish branches of UK bodies it might have been expected that the resources would be geared towards Scottish schools. The results do show that the organisations respond quickly to curriculum changes to ensure that their materials are relevant and used in schools. For the first time resource providers can refer to a specific aspect of the curriculum, for example, their resource may be suitable for use with '5-14 Environmental Studies Curriculum, Understanding Living things and the processes of life, Interaction of living things with their environment, Level C' and every primary teacher will know where this resource can be used. Prior to the introduction

of the 5-14 Programme, it was not possible to do this on such a wide scale, as the different regional and national curriculum guidance material given as examples in Chapter 3 demonstrate. It would, therefore, appear that the 'secret garden' of the curriculum, perceived as being kept behind a closed door by teachers and which was a cause of concern for politicians (as noted in Chapter Five), has been unlocked by a politically driven curriculum change. However, it has allowed other visitors, in the form of interest groups and industrial interest, to enter the door, welcome or not.

In order to publicise their educational activities the organisations were asked which means of publicity they used. Nearly fifty percent used direct mailing to schools and direct mailing to individuals. In the first of the pilot studies, at the Primary level, direct mailing received one the lowest percentages, with newspapers, resource centres and the staff rooms as the most likely places that the teachers received information about new resources. By the next year, the figures indicate that while the above were still good sources of information, by far the highest figure was given for direct mailing. This correlation suggests that there has been an increase in direct mailing activities and that this is a successful means of getting information about new resources to the teachers.

Educational publications were also used by a significant number of the organisations but, although TES was the most often cited, many other publications were also mentioned These ranged from resource directories, newsletters, SCCC and SNH publications, publications by the individual organisations and commercially produced educational guides. This wide range demonstrates the many opportunities available to the organisations to publicise their work and the nature of the publications means there is little or no costs involved to the individual organisations. In addition to publications there was also a wide range of events used as publicity tools.

Interviews with teachers

The first two phases of this research has involved the use of postal questionnaires to teachers and resource providers. This third phase of the research involves face to face interviews with teachers in their schools.

In the initial questionnaires carried out in 1994 and 1995 the teachers were asked general questions about farming studies being undertaken in their schools. In the survey of resource providers an indication was given of those organisations which were undertaking educational activities relevant to a farming topic. The following are the results of in-depth semi-structured interviews with teachers who had all undertaken a similar farming project. These took place in 1997 when the 5-14 Environmental Studies Curriculum guidelines were being used in all the schools. It therefore provides data relating to farming and the 5-14 curriculum.

The schools were selected because they had entered a farming competition called the School Shield Competition. (This competition was referred to earlier in Chapter One) It was organised on behalf of the NFUS and the RHASS by SFACET and consisted of a farming related project for the pupils to undertake with the final entry taking the form of a workbook and poster. Small cash prizes were given to the winning schools and the winners were also given free entry to the Royal Highland Show. The competition was open to all Primary Schools in Scotland and in 1997 there were 10 entries from Primary classes.

It is not proposed to identify either the schools or the teachers for reasons of confidentiality. However, in order to provide a background to the types of school and the classes involved the schools are given a reference number. The teachers who were mainly responsible for undertaking the competition were interviewed and they came from schools in the locations given in Table 8.9 together with the class[8] that took part in the competition.

Table 8.9 Location of school and classes which took part in competition

Ref. No.	AREA	CLASS ENTRY
1	Moray District, Aberdeenshire	P4-6
2	Banchory, Aberdeenshire	P3-4
3	Portlethen, Aberdeenshire	P6
4	near Huntly, Aberdeenshire	P4-7
5	near Castle Douglas,	P3-4
6	Newtown St Boswells,	P6-7
7	Rothesay, Isle of Bute, Argyll	P3-4
8	Mid - Aberdeenshire	P4-5
9	Alloa, Clackmannanshire	P7
10	Rumbling Bridge, Kinross	age11 (independent/special school)

Table 8.10 provides a general description of each of the schools. They range from a very small rural school to a large primary located within a small town.

Table 8.10 Description of schools in sample

School	Description
1	One of smallest primary schools in the area with only 10 pupils (this had recently increased from 5). Very rural area, parents mostly worked on the nearby large estate. Head teacher plus part-time help.
2	Medium sized primary school in semi-rural area.
3	Medium sized primary in expanding settlement close to Aberdeen
4	Small village school
5	80 pupil village school, 4 teachers
6	Medium sized primary in a Borders town, recently moved to new premises.
7	Small-medium sized school in semi-rural location
8	Large village school, expanding due to new house building in area. One or two composite classes but will be expanding to single classes in next few years
9	Large urban primary school
10	Small independent school for children with special needs, in rural area

Teacher's background information

The teachers who took part in the interviews were asked for a few details about their own background and training and the results are given in Table 8.11. It was found

that 80% had a rural or partly rural background. Only one had had any training in a subject relating to farming, this was hatching chicks and it had almost put her off the subject!

Several teachers felt that it was not an essential part of teacher training either because their own background knowledge was good enough or as teachers were trained to teach children, the subject matter was not important. Others felt that it would be useful for farming to be included in training courses for teachers without a farming background. They considered that the first hand experience of a farm visit was important. A teacher who had attended the teachers' training college in Aberdeen noted that they had concentrated on the oil industry as the resources were readily available, other basic industries had been ignored. This demonstrates the influence that one industry can have at a relatively local level.

Table 8.11 Background of teachers including their training

School/ Teacher	Background-rural	Training	Date	Farming in training	Reasons why farming should be in training
1	Partly	Northern College	59-65	No	Not an easy topic, need someone who is knowledgeable
2	No	Coventry	70-73	Not given	History and drama
3	Yes	Northern College	83-86	No	For teachers with little knowledge of farming/farming background
4	Yes	Aberdeen	55-59	Not known	Own back ground good enough, any knowledge useful – bring own knowledge with you.
5	Yes	Craigie	91-95	No	Doesn't matter what the topics are – trained to teach children
6	Partly	Moray House	72-75	No	No – changes in teaching practice
7	Both	Moray House/ Jordonhill	74/75 92-95	No	Teachers should visit farms
8	Yes	Northern College	88-93	No	Concentrate on oil industry – lots of resources, basic industries ignored.
9	Yes	Callander Park	77-80	Yes	Not helpful – hatching chicks in science – put off
10	No	Craiglockhart	73-75	No	Yes – hands on experience

[8] most of the classes were composite hence for example P4-6

General observations on the background to the interviews

Unfortunately, the competition did not attract a large entry, only 10 primary schools. However, the teacher from each of these schools who had been most involved with the competition agreed to be interviewed. The competition had been running for approximately 27 years and some of the schools taking part in 1997 had entered on a number of previous occasions. The relevance of this factor was that the interviewer was known to several of the teachers, but not to others. This fact may have resulted in minor deviations such as mentioning resources that the author was connected with. It is not considered that this affected the results overall as the questionnaire was semi-structured and this was adhered to as far as possible in all cases. The very low number of entries raises many questions both regarding farming in the curriculum and the value of competitions. The competition was discontinued in the following year when the number of entries fell even lower. This was despite information being distributed to every primary school together with information on how the project could be used in the 5-14 Programme.

Of the 10 schools, 50% were from Aberdeenshire. This provided the opportunity to examine and identify if there were any variations between the school within one local authority area. The Aberdeenshire schools also ranged from a very small, one teacher school in a remote rural area to a large primary school in an urban-fringe setting. While the other schools were located throughout Scotland, only one was located in the Central Belt and there were no schools from an inner city area.

The competition entries had to be completed at the end of April, prior to the interviews. The main drawback to this was that in most of the schools the resource boxes that had been used had been returned to the resource centres and the teachers were not always able to remember the contents. However, from the interviews it became apparent that most of the resources contained in the centres were not appropriate or had not been used.

Results of interviews

The teachers were initially asked which of the teaching staff were involved in curriculum planning for the school as a whole. From the results shown in Table 8.12, it appears that, with the exception of one school, all the teachers were involved.

Table 8.12 Teachers involvement in curriculum planning

School	Teachers involved in curriculum planning
1	Head teacher – 1 teacher school
2	All
3	All
4	All
5	Each teacher plans own topics
6	All involved with school plans and forward plans
7	Headteacher
8	All
9	All
10	All

They were then asked how topics were chosen for inclusion in the curriculum plan the responses are given in Table 8.13

Table 8.13 Curriculum planning in schools and choice of topics

School	
1	Cycle of topics- choose from history/local studies/geography. Use 5-14 documents. Topics suggested by the local education authority.
2	To link up with guidelines. Two projects per term. Need some flexibility.
3	Looked at previous topics about 2-3 years ago – matched them to 5-14. Selected the ones which covered the most strands.
4	Topical subjects, interests of children. Adapted Grampian region 5-14 guidelines.
5	Two year cycle – aimed to provide balance. Change topics to suit teacher and pupil.
6	Personal choice of teacher. History/geography/science – choose one of these.
7	List of topics – item bank – select topics appropriate to level of pupils. Source of topics not known but could possibly come from a group of local head teachers.
8	Looked at existing topics and saw how these fitted into 5-14. Farming was one of these topics. Select from within a topic grid
9	From Fife guidelines. Have not developed environmental studies yet but will develop own.
10	Try to stick to 5-14 but need to adapt to pupils individual needs. Also teachers interests. Children's interests are very important

These results indicate that each school operated a different system of curriculum planning. The 5-14 Guidelines were used for guidance, as were regional guidelines but often topics used previously were fitted to the new curriculum. The results highlight the need for flexibility to accommodate the needs and interests of both the teachers and pupils.

Table 8.14 provides more details on the planning of curriculum topics. Again it shows a wide variation from school to school, with some planning a two-year cycle, others a three year. However, it appears that many of the teachers left their final planning until they knew their pupils for the next year. This demonstrates the flexibility that the teachers had prior to the introduction of the 5-14 Programme remains.

Table 8.14 Planning the curriculum programme

School	
1	Yearly – 4 terms/4 topics
2	2 year cycle – autumn start for planning
3	Every year – start May-June – when know whether straight or composite class
4	Topic grid – year in advance plan – term work – monthly planning – daily planning
5	Summer
6	Year plan – plan on a termly basis
7	Environmental Studies development plan – 2-3 years, August – when know children – have to be flexible.
8	3 year cycle, planning in August
9	Choose 3 topics from 6 – need to know children
10	Whole term – respond to needs of children

The teachers were asked to identify where farming fitted into the school plan and the results are shown in Table 8.15. They indicate that it fitted into a variety of topics including science, geography of Scotland and healthy eating. One indicated that it 'didn't really fit' but they had wanted to take part in the competition.

Table 8.15 Where the 'farming' topic fitted into the school plan

School	
1	Local study – landuse
2	See plan
3	Scotland – see plan
4	Children's choice – healthy eating – Health education
5	Wrong time of year - farming in general
6	Geography of Scotland
7	Science – food
8	See plan
9	Didn't really fit – but science and healthy eating
10	Farming done every year . conservation/ countryside taught through experience.

The subsequent section of the interview focused on the resources used in the farming topic, the source for these resources and their final selection. Table 8.16 indicates that topic boxes/resource kits from either the school library or a resource centre were

used by 70% of the teachers. Other also used their own knowledge and resources together with material from local companies and local people. Two mentioned the Scottish Farm Packs produced by SFACET, also mentioned were Dairy Council packs, Farm and Countryside Project Book[9], Scottish Farmer and Sprouts. It must, however, be acknowledged that the resources produced by SFACET may have been mentioned because of the author's connection with that organisation.

Although it appears that the topic boxes were well stocked with resources on farming, they were not always suitable either for the topic 'Food from Scottish Farms' or for the ability level of the pupils. Several teachers contacted local companies and asked for leaflets and samples to supplement the schools resources and one teacher commented that they used 'anything that they could find'. Often these materials from companies were not designed specifically for use in an educational environment rather they are part of their publicity and advertising material. The final selection of the type of resources selected is shown in Table 8.17. This clearly demonstrates the ability of individual teachers to pick and choose the materials that they use for teaching any topic within the 5-14 curriculum and that this personal choice may be made for a number of reasons, which may be related to personal, political or social preferences rather than from a purely educational standpoint. In addition, it would appear that no one school teaches a topic such as farming in exactly the same way as another school. This is even more evident in the case of the teachers taking part in this survey as they were all undertaking a very specific topic related to farming, yet each interpreted it differently.

[9] Produced by the NFUS as part of their Farming in Scotland – a Story Worth Knowing Initiative in the mid 1980s.

Table 8.16 Finding the resources for a farming topic

School	
1	Topic box from library – different levels available
2	Resource kits from school library service – books, tape, slides, pictures
3	Own knowledge/resources – nothing in school library. Kit box from Resource centre. Local mart/food producers
4	Kits from school library service
5	Topic pack from library, topic pack from school, own resources, children's own material
6	School library. Resource boxes from resource centre – not used. Scottish Environmental handbook – for names and addresses
7	Topic boxes (in school), own resources
8	Teachers own knowledge, Scottish Farm packs, CD-ROM. Dairy Council Pack, own resources, slides
9	Used Royal Highland Show catalogue and wrote many letters to companies, Farm and Countryside Project Book, 'Sprouts[10]', Scottish Farmer, Stirling Council
10	Other staff, Scottish Farm Packs, local people, local library

The interviewees were asked what had influenced their selection of resources (Table 8.18). For 60% cost was one factor, but free material was acceptable. One teacher considered that SFACET resources were expensive and that it was difficult to obtain Scottish material from Scottish organisations. One felt that commercial resources were not always geared to the needs of the children. This factor was felt to be important as several noted the level of their pupils as influencing their selection.

Table 8.17 Selecting the resources for a farming topic

School	
1	Needed to supplement boxes. Wool Board
2	Suitability for age range. Coloured pictures
3	Depends on 'theme' of topic
4	Own knowledge
5	No lack of resources -have to be selective
6	Mainly geography books, cookery books. Anything teacher could find.
7	Simple worksheets, visually interesting, enough to stretch pupils – range of abilities.
8	From school resources and resource box – relevant to topic but books not pitched at right level
9	Results from letters
10	By level of pupils

[10] 'Sprouts' – newsletter for teachers produced by the Scottish Farm and Countryside Educational Trust

Table 8.18 Factors influencing the final selection of resources

School	
1	Cost – if have to send away for them. Have to meet teaching needs
2	Cost – commercial resources – anything that's free or up to £5.00, otherwise get on approval. Clarity of content
3	Cost of trips. Safety
4	Use all resources available to suit level. Commercial products-not always geared to needs of children and have to be adapted.
5	Cost – SFACET resources too expensive, difficult to obtain Scottish resources or to obtain from Scottish organisations
6	Simple – for levels of children – concise, clear. Cost – get anything for nothing.
7	Appropriateness, availability, not too difficult but stretch more able pupils
8	Age level, bright and colourful, suitability to topic, cost.
9	Not given
10	Children's individual needs

Although the teachers had only recently been undertaking the farming project, not all of them were able to provide details of the resources used. The topic boxes had been returned and they had moved on to another curriculum area with their classes. This provides evidence for the problem of recall in this type of research as noted in the methodology. Again many teachers listed resources from local companies and organisations such as the SSPCA and the National Dairy Council.(See Table 8.19) In the previous section it was noted that the National Dairy Council did not complete the questionnaire as it had only just started to respond to Scottish schools, it appears however that this did not deter teachers from using their resources.

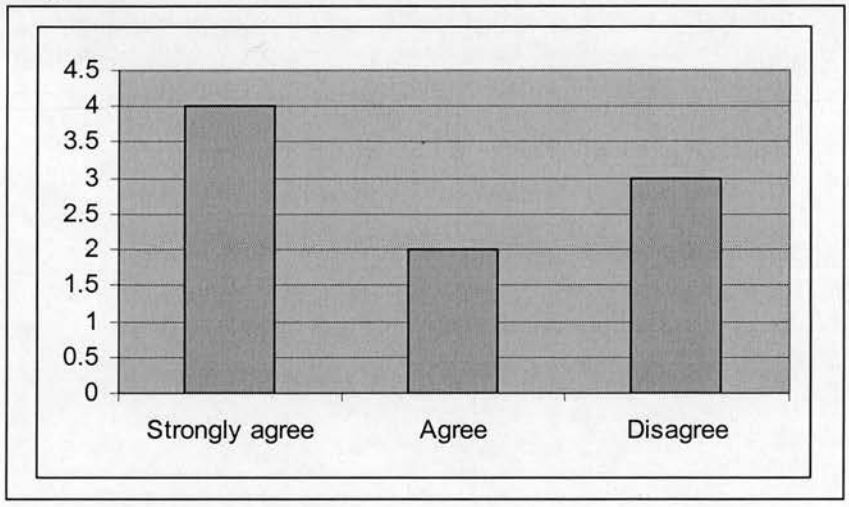
Table 8.19 Final selection of resources

School	
1	Topic boxes – good books. Lots of resources available. Final selection not known
2	(List was to be sent) Dorling Kindersley
3	Recipe books, local companies, SSPCA talks (plus list)
4	Around Scotland video (list to be sent)
5	National Dairy Council, local cheese company, Dalgety, plus others
6	Provided list
7	Children's experiences, teachers experience, Encyclopaedia Britannica Provided list – wealth of materials to choose from.
8	Provided list
9	Catalogues/leaflets from companies. Didn't use any books – only for information on vitamins. Scottish Farmer
10	Library books – list not available as books had gone back

Resources produced specifically for 5-14 Programme

All the teachers used resources which needed to be adapted for use with 5-14 and they were asked if they felt that it was important for resources to be produced specifically for the new curriculum guidelines. The results are shown in the chart below

Chart 8.2 Responses to question whether resources should be specific to the 5-14 Programme



It can be seen that 60% agreed that it was important and none strongly disagreed with this statement. This indicates that if farming resources, or indeed new farming resources are to be produced they are more likely to be used if they relate directly to the 5-14 curriculum.

All the results above have mainly concentrated on resources such as books, worksheets and leaflets, however, when the teachers were asked which resource they considered to be of greatest educational value (Table 8.20). Significantly, the majority stated the people and the visits. These visits were to farms, marts, supermarkets and other relevant locations.

Table 8.20 Type of resources considered to have the greatest educational value

School	
1	Farm visit/visit to mart
2	Farm visit/people/resource kit
3	Visits/people – first hand experience
4	All useful
5	People/farm visit
6	Leaflets from organisations, people
7	Farm visit
8	First hand experience
9	Not given
10	Farm visits

Despite the fact that many of the teachers had expressed the view that there were plenty of resources available to teach a farming topic, when asked if they considered that there were any gaps in the coverage of these resources, the majority were able to provide suggestions. These are shown in Table 8.21 and they vary between each teacher and include packages and worksheets, Scottish information, initial contacts and others related to cross-curricular activities. There is no real consensus on this question but perhaps the comment 'yes but I managed to find something else' applied to most of the teachers.

Table 8.21 Gaps identified in the resources available for a farming topic

School	
1	Resources targeted at 5-14
2	Worksheets for younger age group, suggestions related to main themes, Cross-curricular activities – music/maths/science
3	Finding initial contacts
4	Topic assisted packages
5	Scottish resources, general information sheets in language children understand.
6	Yes, but managed to find something else.
7	Tape recorders/video – technology in school
8	Resources on pigs, food side of sheep, fruit and vegetables, people to talk
9	Information on farming areas etc
10	None

During the interview process other relevant comments were recorded and these are summarised in Table 8.22 below.

Table 8.22 Additional comments made by the teachers

School	
1	Knowing who to contact for additional resources. Good quality resources hard to find Regional guidance available but tend to use guidelines Separate countryside topic based on the local river
2	Time factor in drawing up resources Management of Environmental Studies Course – Grampian region in-service course. SCCC resources catalogues useful.
3	Use own experience and those of children. Can't spend as much time as used to – less depth Other projects – forestry/conservation at field centre. Trips now have to be paid for therefor have been cut down. Used to use local agricultural college but they now charge. Topic boxes are made up for 'the farm' as opposed to Scottish farming/local farming. Books are not always accurate.
4	No lack of resources Trees/countryside/nature – separate topic
5	An easy topic to resource If topics designed for 5-14 would still have to adapt for individual pupil abilities. Plenty of advertising material available.
6	Plenty of resources available but not necessarily in every school
7	Time needed to develop bank of materials. Plenty of material available. Composite class – therefor have to be flexible in selection of topics. No help given from l.e.a. – resource centre has closed down No co-operation between schools –'everybody is territorial'
8	Time – therefor 5-14 resources would be useful Separate countryside project – country code etc. Used publications such as Teachers Treasure Chest, Child Education, Junior Education – resource lists.
9	Companies very helpful – sent samples Region used to run an in-service at the local agricultural college until the money ran out about 5 years ago – very practical Often composite class therefore cannot plan topic until know which class
10	Chief resource – people Did not use videos/slides as they would not have held children's attention. Although rural school most of pupils are from urban areas – small classes – 6 pupils.

Many felt that farming was an easy topic to resource, although there were gaps in the resource coverage. Some felt that there were some good quality resources others felt

that the resources available to them were often inaccurate and/or out of date. In some areas regional guidance was available but not necessarily used, while in others, advisers were no longer available and the resource centres were closing down since local government reorganisation had taken place. However, it appears that many companies were very helpful and provided material (and in one or two cases samples) for use in the project.

Two other changes had also had an effect. Firstly, relating to the facilities offered by the local agricultural colleges. In the mid-1990s the funding for these colleges changed from local to central government. This resulted in farm visits by local schools being charged for and training for teachers no longer being available. Secondly, the 5-14 curriculum allowed less time for both preparation and for the project as a whole. This is the reason why many of them considered that resources geared specifically to the 5-14 curriculum would be very useful.

Many of the teachers also undertook other projects which were seen as being related to farming. These included the countryside, nature, trees, rivers, forestry and conservation. There is no apparent connection between these studies although this might not be the case when they are being undertaken. There does however appear to be a trend to segregate these topics rather than for example integrating farming into a countryside topic. Again this points to a lack of coherence in the teaching of farming as a topic.

Finally, as one teacher from a rural school noted not all her pupils had a rural background. With increased mobility, commuting to work and migration to rural areas, it can no longer be assumed that children from the countryside have the existing knowledge and experiences to enable them to have true understanding of farming and all its associated activities.

Some years earlier Musgrave had commented on a similar situation where a rural school had a number of pupils from urban backgrounds but who live on the local RAF base.

> 'Deep differences in the ways of thought of the two types of children were seen. The city children had a greater factual knowledge of the technical world of today and on the surface were more sophisticated; the village children showed a deeper understanding of the ways of the country and because of this had a subtler feeling for life and death, growth and decay' (Musgrave, 1965:130).

While this was written over 30 years earlier and the differences may not now be so great, it is still recognised by the teachers that there is a difference in understanding farming and countryside topics between those children brought up in the countryside and those who have moved to the countryside. Musgrave also notes that 'it would be hard to teach a rural way of life against a background of tall chimneys' (*ibid*:130).

Conclusions

Both the questionnaires to teachers and the teachers' interview comprised only small samples. There could be many reasons for this and it would be wrong to speculate or try to draw any conclusions on this matter. However, the majority of the teachers responding to the questionnaires had either a rural background or close relatives living and working in the countryside. It could be said that it is the personal experiences of the teachers that encourages them to undertake a farming project.

The teachers' knowledge of farming does not appear to be gained or even enhanced by teacher training as there does not appear to be a specific location for farming in the majority of courses undertaken by the teachers taking part in the surveys. However, the majority of the teachers considered that farming should be part of the curriculum. The place for this topic appeared to be most frequent in the Upper Primary, particularly Primary Six. Other types of land use were taught and these were part of other countryside related topics such as 'trees', 'conservation', 'the countryside'. It is suggested that these topics compartmentalise the subject and do not give a coherent picture of farming as an integrated part of the countryside.

The wide variety of resources used in either the pilot studies or the interviews indicate that the teachers still have autonomy over the precise details of the curriculum. "How food is produced" would appear to be the most important aspect of farming and the teachers considered that pupils should also learn about farming systems.

Of the resources available, in the pilot surveys the teachers in primary schools used their own resources most frequently, while in secondary schools text books were widely used. To find out about new resources teachers used advice from colleagues and newspapers, although by 1995 direct mailing was the most common means of information. This corresponds with the resource providers survey, where direct mailing was thought to be the most successful means of publicity. It would appear that resource directories and advisory services were the least likely to be used. With regard to the latter, the surveys were undertaken prior to the local government reorganisation and most areas would have had an advisory service. In the teachers survey, one respondent commented on the loss of the local resource centre due to the reorganisation.

The farming related organisations whose resources were used most frequently, the Milk Marketing Board and the Potato Marketing Board either no longer exist or no longer have an educational remit. Of the other organisations the RSPB, SNH, the Forestry Commission and the National Trust for Scotland were used by a high percentage of the respondents and the farming organisations, SAA and FFES were only used by a small percentage of respondents. It is significant that the former organisations are large and have significant budgets specifically for education, the latter, representing the agricultural community, were small (two-three staff each) with correspondingly small budgets.

The resource providers' survey produced evidence to suggest that there were a large number of organisations all with an interest in farming and rural land use and who were providing resources for Scottish schools. The majority of these were charities

with a small representation from trade organisations, government agencies, television companies and commercial organisations. Of this sample only SFACET and FFES represented the agricultural community as a whole although trade organisations such as British Agrochemical Association represented another agricultural sector. The National Dairy Council and the Meat and Livestock Commission did not complete the questionnaire although replies were received from them. The NFUS, the RHASS and the SLF were excluded from the survey because they did not produce any resources.

Significantly for this research, the reasons why these organisations were undertaking educational work was to increase understanding of their own work and issues associated with it but several clearly indicated that it was to influence the pupils or to promote their work or products. They had thus recognised that the curriculum was a means of gaining influence and that resource materials were the most effective means of achieving this. The fact that the majority of these also indicated that they were producing resources for the Scottish curriculum indicates that the 5-14 Programme is also providing opportunities for the organisations to gain influence. Because the 5-14 Programme is not entirely prescriptive, organisations can suggest where their resources fit into this curriculum and, significantly, for the first time this will be relevant to the curriculum in every single primary school in Scotland. The Scottish Office have not only gained control over the curriculum but they have allowed others to use it to gain influence.

As with the resources used by the teachers, the methods employed by the resource providers to promote their materials was varied. Direct mailing was the most popular with publications such as TESS used by some. Directories were mentioned by some organisations even though they did not appear to be used frequently by the teachers. Many of the resource providers also ran an information service, some receiving in excess of 1000 requests per year while others received less than 100.

While most of the organisations were attempting to gain influence through resources, eight had also tried to influence the curriculum at a strategic level by responding to the Working Paper 13 on Environmental Studies. This was only a very small proportion of the total respondents and only four of these, RSPB, SEEC, SNH and SSPCA, responded individually, the others responded through an umbrella organisation such as SFDES. Because of the time lag involved, it may have been that other organisations responded but they were unable to recall this. However, the significant factor for this thesis was the organisations which did respond, most notably RSPB and SNH. As noted in Chapter Five these two organisations were also responsible for sponsoring SCCC exemplars and, with SCCC, for organising the Common Agenda Workshops. They would, therefore, appear to be the key players in influencing the development of the Environmental Studies curriculum. Indeed, it might be suggested that part of the 'selective tradition' that makes up the curriculum has been influenced by these organisations. It would appear that none of the farming organisations responded in this way and thus they had very little input to the 5-14 curriculum at a national level.

The final responsibility for the content of the curriculum and the resources used still remains with the individual classroom teacher. It would appear that while in most schools curriculum planning involves most of the teachers, the 5-14 curriculum still allows for flexibility to adapt to the needs and interests of both the pupils and the teachers. This is demonstrated by the fact that the farming project did not always fit into the curriculum plan of the schools taking part in the competition.

The resources used by the teachers in the same farming project varied between each school, even between those in the same local authority. In some cases, the choice of resources was governed by cost and by the abilities of the children, but it would appear that overall there was no lack of resources on this topic. Most felt that it would be useful if resources were designed specifically for the 5-14 Programme as this would save them time. The teachers, however, did not always use materials specifically designed for educational use. Indeed, some were purely of a promotional

nature and were advertising certain products that might be attractive to children. How the teachers choose such materials must be subject to very subjective decisions. Thus, it could be argued that these would be no more biased than any "educational" resources produced by commercial companies and interest groups.

However, it should be noted that all the evidence used in this thesis is based on the responses received from resource providers and teachers and that no observational checks were made on the actual impact of any resources on the delivery of the 5-14 Curriculum. Taking this into consideration, of all the resources used by the teachers the ones considered to have the greatest educational values were visits to farms and the farmers themselves. This confirms the views of Dewey when he noted that

> 'the phrase "realising sense" is used to express the urgency, warmth and intimacy of a direct experience in contrast to the remote, pallid, and coldly detached quality of a representative experience...it is the difference between learning mathematical equations about light and being carried away by some peculiar glorious illumination of a misty landscape' (Dewey, 1920:272-273).

Chapter Nine

Conclusions

This thesis has addressed, both historically and currently, the way knowledge, a contested area, comes to be replicated in the curriculum. It has located the contribution made by the landowning and farming communities to Scottish education in general and to the curriculum in particular. Central to this thesis has been the debate over the ability of influential groups, historically, to use education as the means to retain or increase their power and control. One source of this control is the inculcation of knowledge into the curriculum. It has been argued (by Williams (1961) and Apple (1993)) that those who make the selection from knowledge, the knowledge that is included in the curriculum, are in a position of power.

However, it is not only what is selected that is important for our understanding of control; it is who is doing the selecting and the effect that this may have on those being taught. It is also suggested that influence is possible through the development of resource material, particularly as teachers are actively encouraged by government agencies such as SCCC to use resources produced by interest groups and by industry. Thus, four key areas were identified as important for this research. These were the role of education in society; the curriculum as a reflection of social change; the curriculum as a selection from the culture of a society and the means by which a curriculum and curriculum content can be influenced. From the historical and theoretical discussion the key question to emerge was what role, if any, does the farming community continue to play in the resourcing of farming in the 5-14 curriculum.

In the first section of this thesis the historical contribution made by the farming and landowning classes to the Scottish education system was outlined; the key position that this group once occupied was established. It has been demonstrated that up until the last quarter of the 19th century farmers and landowners were indeed able to exert some power and control over the Scottish education system, at both local and national level. At a local level, their power lay in the Scottish system of parochial

schools, where the landowners and the church were able to appoint schoolmasters and dictate the form that the curriculum would take. At a national level, organisations representing the landowners and farmers, and in particular the Highland and Agricultural Society of Scotland (now the RHASS), were able to influence the government of the day, particularly in relation to agricultural education. At one time the membership of this organisation consisted of some of the most powerful and, usually, well respected men of their generation. They were thus in a position of authority and were able to lobby the Privy Council and help to secure funding for agriculture to be part of the curriculum.

This influence also took the form of experiments in education, for example, in the SSPCK schools and the initiation of an agricultural school. These represent some of the first vocational courses undertaken in the schools. However, these experiments always appeared to be short lived. It was also possible for individuals, such as the Duchess of Sutherland, who founded a technical school in the Highlands, to exert an influence on schools, albeit at a relatively local level.

From the time of the Industrial Revolution, the 'new industrialists' became powerful voices and the rural communities declined as more people moved to the cities for work. The farmers and landowning communities became increasingly concerned, not only about their loss of power and their place in the rural hegemony but also the effect that education was having on their workforce. It would appear that while they were keen that rural children should have some level of education, they did not want them to be too well educated and thereby be encouraged to leave the farms for the towns. They were concerned that they would lose their labour force to industrial areas.

In this thesis it is suggested that, historically, farmers and landowners had been operating a form of social control; by providing and encouraging education which kept their workers in their 'rightful' places in society and provided them with better (ie more literate) workers. This in turn increased their economic viability and maintained the rural hegemony. At the best it is argued they appeared to be

paternalistic, at the worst exploitative. They were thus using education to try to maintain their dominant position in society. However, this position was lost as the urban population grew less and less dependent on the farmers for their food.

Through this investigation into farming as one aspect of the curriculum, it has been possible to delineate the changes that have taken place in the social groups which influence or exert power in the control of education and the curriculum. From the landowners and the church, to the State (through the Scottish Office), the local authorities and advisory groups and back to the State. It has been argued that these changes are a reflection of the way that society has changed over the last two hundred years, from a rural to an industrial society. This has led to an associated dominance of urban influences over education and the curriculum.

During the latter half of the 19th century, particularly after the Education Act 1872, the State began to gain more control over education, through the Scotch Education Department and local councils. The control was thus taken away from the church and the landowners. The Scotch Education Department, particularly at the beginning of the 20th Century (when it would appear that in effect it was controlled by two notable men, Craik and Struthers), began to exert more and more influence over the education system and the curriculum. It must also be noted that at approximately the same time other influential men such as Sir Patrick Geddes and John Dewey, both advocated the use of agriculture and the countryside as part of the educational process. Their legacies remain in the curriculum today, through the development of environmental education and the continuing emphasis placed on child-centred education.

Although, by the beginning of the 20th Century, the Scottish Office, through the Scotch (later Scottish) Education Department, was in a position of control over the curriculum, it has been demonstrated in this thesis that as early as 1931[1] advisory committees on the curriculum were being used and were producing advice for all schools. This committee format became the norm in subsequent curriculum

[1] SCRE report on the curriculum for pupils 12-15 years old

developments, including the 5-14 Programme. The membership of these committees consisted of representatives from schools, training colleges and advisory services. It would appear that there were very few subject specialists on these committees. Thus the curriculum advice was coming from internal educational sources and the various curriculum committees represented a powerful group in curriculum development. The most powerful of these curriculum advisory groups was initially the CCC, later to become the SCCC. It was noted that the Scottish Office and the ruling politicians were unhappy about the power that the SCCC had gained in curriculum matters and hence it developed a new curriculum, the 5-14 Programme. It is likely that they were also unhappy that the teachers had control over the curriculum and as Darling (1999) commented 'there was no possibility of any individual teachers devising wholly individual or idiosyncratic curricula' (Darling, 1999:34).

From the investigation of primary and secondary sources, it would appear that the farming community as a whole had little influence on general education during the 20th Century. However, its authority remained with post-school agricultural education although the influence of organisations such as the Royal Highland and Agricultural Society of Scotland declined as the role of the agricultural colleges expanded. As this influence waned the agricultural organisations turned to more general education and, at one time several sectors were undertaking educational work, for example the Scottish Milk Marketing Board, the Meat and Livestock Commission and the Potato Marketing Board.

By the mid-1990s, only one Scottish organisation, the Scottish Farm and Countryside Educational Trust was directly involved with educational work which it carried out on behalf of the main farming organisation, the RHASS, the NFUS and the SLF. In 1998 SFACET was taken over by the RHASS and renamed the Royal Highland Education Trust (yet another name change) and both the NFUS and the SLF withdrew from this educational work. It is notable that in the survey of resource providers many more organisations (often with conservation interests) had begun to undertake educational work. Indeed, it was observed that over the last five years over 36%(of the total responding to this question) had started this type of activity.

In the farming sector the complete opposite had occurred. The reasons for this decline were both political and financial; the government was instrumental in the loss of the Milk Marketing Board, the farming community was severely affected by the ban on beef exports and the high value of the pound in relation to other currencies, particularly from countries within the European Union[2]. It does also suggest that the current leaders of the farming organisations did not consider education as being an important means of influencing the public. While this relates to the national level, at a more local level this is not necessarily the case and the school-farm links scheme, initiated by SFACET, continues to this day.

The second issue addressed by this thesis was whether farming had a place in the more recent, and indeed, current curriculum and, thus was part of the selection of knowledge, the 'selective tradition' of Williams and Apple.

It has been seen that prior to 1900 the subject 'agriculture' rather than 'farming' was part of the curriculum of some, but not all, rural schools. Despite a number of initiatives, including the training of teachers, agriculture was not a very popular subject. For the most part it also appears to have been taught from textbooks rather than more practical classes. Even at this time it was recognised that the teachers of agriculture had to have a real feeling for the subject, they needed the appropriate background and personal experience or 'cultural capital'[3] to grasp the subject and teach it well.

The critical point for farming in the curriculum came in 1900 when, as Mason (1935) recorded, it was relegated to the realms of 'Nature Knowledge'. Conversely, it could be said that it was promoted to be part of the selection of culture, the 'selective tradition' as noted by Apple (1993), a selection that as has been demonstrated in this work continued until the present day. By putting farming into 'Nature Knowledge' it

[2] This affects the amount of subsidies the farmers receive under the Common Agricultural Policy.
[3] 'cultural capital' (Bourdieu and Passeron 1990) is used here as a theoretical construction to aid understanding about the role of social background on educational attainment.

became an accepted part of the curriculum of a school, whether in a rural or urban location.

During the first half of the 20th Century there appears to have been very little by way of curriculum change or advice available to teachers on the delivery of curriculum. The Scottish Office issued Codes[4] containing information on the subjects which should be taught, but the classroom teachers were responsible for final selections. The subjects included English, Mathematics, History, Geography, Nature Knowledge, Science and Religious Education.

The publication of the Primary Memorandum in 1965 was noted as a watershed in terms of the Scottish curriculum, as it introduced a much more child-centred curriculum as had been advocated by John Dewey nearly fifty years earlier. Farming was one of the topics used as an example in the Environmental Studies curriculum. It was from this publication that the term 'Environmental Studies' came into regular use, as a replacement for 'Nature Study'.

It has been demonstrated in this thesis that farming continued to be an important topic in the Environmental Studies curriculum. It was identified as being part of the curriculum at a national level through initiatives such a COPE[5] and its subsequent Reports, through publications of HM Inspectors of Schools and the PEDP[6]. At a regional level it was demonstrated to be part of the curriculum by Lothian Regional Council advisory documents and, at a local level, through individual examples of farming topics undertaken in individual schools. Training colleges produced guidance material which included farming topics, although many of the teachers interviewed in this study were unable to recall any farming as part of their training courses.

Through an analysis of the 5-14 Environmental Studies Guidelines and examples from individual schools it has been established that there is a place for farming as a

[4] Codes – rules issued by the Scotch (and later Scottish) Education Department and which governed the daily conduct of Elementary Schools. The First Code was issued in 1873. (Scotland J.1969:48)
[5] COPE – Committee on Primary Education

topic in the delivery of the new curriculum. The samples of teachers (albeit small in number) in the pilot surveys and the interviews clearly demonstrate the contribution that farming can make to the curriculum. Indeed, farming has been an accepted part of the Primary curriculum for nearly 100 years. It has been located in Environmental Studies and Education/Industry Links during the period from the introduction of the Primary Memorandum to the implementation of the 5-14 Programme.

It has been seen that the 5-14 Curriculum and Assessment Guidelines, which were developed over a period of years, through committees and extensive consultation, are the first nationwide curriculum in Scottish schools. Although not prescriptive, these Guidelines indicate that certain attainments must be covered while it remains up to individual schools and teachers to decide on the exact topics. Through the development of whole school plans it would appear the topics are planned well in advance, and it is suggested in the Guidelines that a 3-year cycle should be adopted.

However, the analysis of the publications noted above revealed different interpretations of curriculum advice by local authorities and individual schools. It remained the responsibility of schools and individual teachers to choose the final selection of what would be included (or excluded) from the curriculum. Thus curriculum content varied from school to school even within the same local authority area.

Although advice on curriculum matters was readily available to classroom teachers from the mid-1960s onwards, it has been noted that they were often slow in implementing any curriculum changes. It was demonstrated in this work that there was a limited timescale for implementing the 5-14 Programme as laid down by the Scottish Office in the Guidelines. This meant that the curriculum changes occurred at considerably faster rates than previous changes and, for the first time, on a national scale.

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[6] PEDP – Primary Education Development Project

In the above discussion it has been suggested that the curriculum and its contents could be influenced by those in positions of power, through advisory groups and through the individual preferences of the teachers. However, other means of influence have been identified and it was during the late 1950s and early 1960s that resources, in the form of audio-visual material, resource packs and worksheets, began to enter the schools as alternatives to the blackboard and textbooks. By the 1970s resources from organisations and interest groups outside the formal education sector had become acceptable and important tools for teachers to use in the delivery of the curriculum. The 5-14 Environmental Studies Guidelines actively encouraged teachers to use such resources. This, in part, was due to the flexibility within the Environmental Studies curriculum which enabled environmental issues to be introduced, partly through the teaching of 'informed attitudes to the environment'. This, in turn, provided opportunities for many organisations to attempt to influence both teachers and pupils, not only through materials but also school site visits, information services and speaker services.

Prior to the introduction of the 5-14 Programme, farming organisations such as the Scottish Association of Agriculture (later to become SFACET) and the National Farmers Union of Scotland were amongst the organisations mentioned as resource providers, both in national environmental education publications such as Learning for Life, and in regional guidance papers including Lothian and Central Region. However, it has been seen that many of the other organisations with interests in the countryside, for example, RSPB and SSPCA, have long-established education sections and may hold views that are often in opposition to farming methods and practices. This has the potential for conflicting information to be provided to schools for use on a farming topic. The views that the teachers hold on such matters may well be the deciding factor in the selection of materials.

Of the main farming organisations, the Royal Highland and Agricultural Society of Scotland (RHASS), which was the most influential body particularly in the earlier part of the century, is rarely, if ever mentioned in curriculum publications, by advisory bodies and at individual school level. This demonstrates both the decline in

the influence attributed to the RHASS and also the value of providing both resources and local activities for the schools.

One of the key players in the production, promotion and distribution of resources for the 5-14 Programme is the SCCC. This organisation has been working in partnership with environmental organisations such as SNH and RSPB in relation to the 5-14 Environmental Studies Guidelines. It is further demonstrated in this thesis that these and other organisations have responded to the challenges of the new curriculum through the production of resources. SNH and RSPB are identified in a number of areas as providers of resources and advice. This thesis thus identifies these two organisations together with SCCC as the key players in the development and control of the Environmental Studies curriculum. Other important groups have been seen to be the SSPCA and the National Trust for Scotland. It is noted that all of these groups have large memberships with considerable financial resources.

It can be argued that those wishing to influence the curriculum are now able to do so from a number of different approaches via advisory committees and the consultation process and, at the individual school level, by offering education services including resource materials and activities. It is suggested that the 5-14 Programme provides much greater opportunities than were ever available prior to its introduction, to influence both curriculum content and delivery at the individual school level. One way in which this can be achieved is by focusing resources and activities on a specific part of the curriculum. With an increased workload due to the implementation of the new curriculum as well as budget constraints, teachers are increasingly encouraged to use the work of outside agencies. However, it would appear that there are few, if any checks and controls, on the content of resources.

Although it has been shown that farming has a place in the 5-14 Environmental Studies Curriculum, it is not necessarily taught in every school and further research would be required to provide an indication of the extent of the uptake by schools of farming topics. However, from evidence produced in this study one can suggest that teachers with a background or interest in farming are more likely to undertake such a

project. It could be said that this is due to the 'cultural capital' of the teachers; this encourages them to undertake a farming project. As the majority of the population now have an urban background, it may be reasonable to suggest that the majority of teachers will also have a similarly urban background.

It is also demonstrated, particularly in the interviews with teachers, that even those teachers with a rural background did not undertake a comprehensive topic of the countryside but continued to compartmentalise the topics into 'farming', 'trees', 'conservation', 'the countryside'. It is argued that this method lacks coherence and it does not help children to understand the role of farmers and agriculture in the countryside as a whole.

From the surveys it is clear that resources play a very important role in the delivery of the curriculum. It has been suggested (by SCCC) that well resourced topics should be undertaken. If farming was not a well resourced topic, this might result in it not being chosen and other topics which are better resourced will be used as alternatives for reaching the attainment targets. This could have the result of fewer schools undertaking farming projects. It is suggested that it is for the farming organisations to produce or provide suitable material if they wish to encourage teachers to undertake a farming project. While the availability of resources may be one factor governing the choice of topics there are other factors. These include the teachers' and pupils' own knowledge and interests and the existing topic work undertaken by the school.

All the evidence used in this thesis is based on the responses received from resource providers and teachers and no observational checks were made on the actual impact of any resources on the delivery of the 5-14 Curriculum. However, the surveys and interviews provided evidence to suggest that there were a substantial amount of resources available for teaching a farming topic and two significant points emerged. One was the fact that teachers were happy to use commercial and promotional materials, especially if they were free (cost was an important aspect in the selection of resources). Secondly, the resources that were considered to have the most educational value were the farmer and the visit to the farm. While the 5-14

Environmental Studies Guidelines encourage field work and visits to locations such as farms, it would appear that there are problems with these, again partly associated with cost. Since carrying out the surveys and interviews major problems have arisen which could cause the school-farm visits to be banned. These are the potential risk of children catching a bacterial infection caused by *E.coli* 0157 and the current foot and mouth disease outbreak which has had the effect of closing farms and much of the countryside to the public.

The resource providers' survey produced evidence to suggest that there were a large number of organisations all with an interest in farming and rural land use, who were providing resources for Scottish schools. Only two of these, SFACET and FFES, had remits which specifically and almost exclusively related to public education on farming and countryside matters. The reasons why the majority of these organisations were undertaking educational work was to increase understanding of their work and associated issues. However, several indicated directed that it was to influence the pupils or to promote their work or products. They had recognised that the curriculum was a means of gaining influence and that resource materials were the most effective means of achieving this. The fact that the majority of these organisations also indicated that they were producing resources for the Scottish curriculum indicates that the 5-14 Programme is providing opportunities to gain influence. Because the 5-14 Programme is not entirely prescriptive, organisations can suggest where their resources fit into this curriculum and for the first time this will be relevant to the curriculum in every single primary school in Scotland. It is suggested therefore that while the Scottish Office[7] may have gained control over the curriculum, there are also significant opportunities for interest groups to use the same curriculum to promote their activities and to gain influence over both the teachers and the pupils. In an area such as farming, over which there are contested views and 'knowledge' is by no means value-free, this is an important finding. If the knowledge of the next generation is dependent, in part, on schooling and the curriculum taught, then what goes into that curriculum must be of paramount concern. If large-scale vocal interest groups can play the 'resource-card' and gain entry into the knowledge

[7] In May 1999 the Scottish Office became the Scottish Executive

taught and learnt in schools, then one might argue that at the beginning of the 21st Century we are seeing another set of dominant interests prevailing. It is by no means clear that these interests are any less value-based than those in ascendancy at the beginning of the 20th Century or the earlier interests of the farmers and landowners.

In the final conclusion, it has been demonstrated that farming has been and remains part of the selection of knowledge, the 'selective tradition' as Apple has called it, that makes up the Scottish Primary curriculum. It has also been shown that the influence of the agricultural communities over the curriculum has declined considerably. They do not attempt to influence so much at a governmental level but rather at an individual school level.

However, whilst these interests decline other organisations such as SNH and RSPB are attempting to influence the curriculum at all levels and have been identified as key players in the selection from knowledge, at both a national and a school level. Their influence is gained at the school level through the production of resources and by precisely locating in the curriculum the places where these resources might be used. The demise of one set of vested interests relevant to 19th and 20th Century farming and the rise of another set of vested interests relevant to the 21st Century is has been the main focus of this thesis.

In McPherson and Raab (1988), Archer is noted as arguing that the education system (prior to the introduction of the 5-14 guidelines) is a pluralist one in which the state played a minimalist role, ceding control to local providers and only making provision itself when gaps were left unfulfilled. She notes that because groups provided for themselves in such systems, provision was finely tailored to their discrete, local demands. These groups poorly articulated with one another and were often overlapping and inefficient. This theory has been demonstrated in this work by the examples of local authorities, individual schools, training colleges and others producing educational materials and resources, and defining the curriculum in individual schools.

McPherson and Raab also note that others (Bachrach and Borak1962, 1970: Lukes 1974) have used the pluralist theory to demonstrate how issues were kept off the agenda for political discussion by tactical, structural or ideological means, thus systematically reinforcing the power of some relative to that of others. The curriculum did not become part of the political agenda until the 1970s when, as noted in Chapter 5, a politician referred to it as 'the secret garden'.

However, the introduction of the 5-14 Guidelines was part of an attempt by the state to gain control over what is taught in schools but it is argued that, by not specifying the final content of the curriculum, other groups such as those from conservation bodies have become influential in both curriculum content and delivery on a national and more co-ordinated means. These groups, such as the RSPB and SNH are seen as providing both legitimate and important knowledge and, in support of the work of Apple, it is suggested that the children's 'common sense' on matters relating to the countryside will be formed through this knowledge. The agricultural community on the other hand failed to grasp the opportunity offered to them through lack of cohesion and political infighting.

However, on the evidence of this research neither set of interest groups can claim much in the knowledge children hold of farming. It is acknowledged that this study is based on a relatively small sample of teachers but, from the evidence obtained from this sample, it would appear that it is individual teachers who have the final say in the choice of resource materials used and, hence, the knowledge taught.

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APPENDICES

APPENDIX 3.1 A Farm Study – Concepts and skills approach

	CONCEPT	Exemplars within Unit
A.	Adaptation	a. Old buildings used for new purpose b. Soil improvements to meet demands c. Farming methods adapting to meet modern needs: fewer workers, more machinery and automation d. Methods and machinery developed to cope with physical conditions such as weather/climate or slope
B.	Cause/Consequence	a. Increased use of farm chemicals leading to increased yields and possibly pollution b. Profit motive leading to fewer workers and more mechanisation c. Profit motive leading to more intensive farming methods
C.	Change/Stability	a. Need for food continues but methods of production change. b. Same seasonal rhythm and activities (ploughing, sowing, harvesting etc.) but new machinery and methods. c. Old buildings still used but use changed and new buildings added.
D.	Conservation	a. Fertility/rotation and fertilisers. b. Safeguards to avoid chemical pollution and danger to wildlife. c. Removal of hedgerows and effect on wildlife.
E.	Evidence	a. Questions asked during farm visits. b. Farm records: maps, statistics etc.. c. Climatic data.
F.	Independence/ Interdependence	a. Population needs food from home and abroad. b. Industries need raw materials. c. More home grown food, less imported, more independence.
G.	Location	a. Site and situation of farms b. Access to markets c. Problems of transport
H.	Similarity/Difference	a. Comparison and contrast of farming past and present to show similar activities and products but different methods of production. b. Many products very similar to those of past but importance has changed as result of effects of imports or changes of diet
I.	Time	a. Pre and post agricultural revolution compared and contrasted. b. Modernisation of buildings, farm methods, products.

(Source:SCES 1981)

Farming exemplar - skills

	SKILL	EXEMPLARS WITHIN UNIT
1.	Researching	i. Finding out about farming processes – milk to butter. ii. Studying local maps
2.	Recording	i. Recording the farming year ii. Rotation of crops iii. Changes with the season
3.	Interpreting Experiences	i. Weather and farming ii. The farmer in the community
4.	Experiencing and Feeling	i. Expressing experiences from the real farmyard or the countryside, eg smell of cows, feel of pigs. ii. Problems of depopulation of rural communities.
5.	Relationship	i. Cows and milk, cows and grass ii. The weather and farming iii. Weeds and pests
6.	Positive Attitudes	i. Importance of agriculture to the economy ii. Prevention of pollution and litter. iii. Problems of bulk farming – disposal of waste. iv. Safety and the farm.

(Source: SCES 1981 pp37-38)

APPENDIX 3.2a Guidance on the selection of topics –COPE/SCES 1984

Ourselves	Our Neighbourhood	Our Homeland/ Scotland	The Wider World
P3 Keeping Safe at Home and School Road Safety Stage 3 What is growing? Keeping safe Outside	People Who Help Us Early Explorations Early Experiences	People Who Help Us Stories of the Past Early Man	**Where our food comes from** Animals of the World
P4 Homes and Families What Helps One Grow Looking After Myself	Our Classroom Our Playground Our Homes (Now, in the past) Our Streets, Parks and Gardens Our Weather Holes, Gaps and Cavities Early Explorations	Scottish Homes in the Past Saxons, Vikings When Our Parents and Grandparents were Young	The Vikings Homes in the Past Homes throughout the World
P5 **Food for Thought** Myself Get Clean Colour	**Local Farm Study** Norman Influence in the Local Area Investigations (part 1)	**A Scottish Farm** Scotland in the Middle Ages	**World Farm 1** **World Food** The Normans
P6 Myself Time to Spare Skills and Spills	River Study Water Study Our Weather Time Investigations (part 1)	Scotland – People at Work Romans in Scotland Scotland in the 18th Century	Ancient Rome
P7 Get Clean Deadly Decisions	Local History Study Environmental Problems Time to Spare – Local Leisure Facilities Skills and Spills – Safety in the Locality Working with Wood Our Weather	Victorian Scotland	David Livingstone Victorian Britain Rich and Poor Countries Today

APPENDIX 3.2 b Guidance on the selection of topics – HMI Case Studies

Ourselves	Our Neighbourhood	Our Nation	The Wider World
P3 Ourselves Our Families Our Pets Our Needs	Where We Stay Going Visiting Our Neighbours Our Shops People Who Help Us	Our Friends/Relatives Living in Other Places in Britain Animals –Working and Wild People Who Help Us	Our Friends/Relatives Living Abroad Animals of the World People Who Help Us
P4 Our Families at work Our Neighbours/Friends at work Working in town Our Gardens	Our Classroom The Playground My House and Home Our Street Parks and Gardens The Seaside	From Home to School From Home to City Centre The Way to Work	Children at Home in Other Lands
P5 What We Eat Foods for Healthy Living	Our School Building Study of Houses and Homes Cottages to Castles Our Area in the Time of Wallace and Bruce Local Industry	**Farming in Our Area** **Farming in Scotland** Scotland-Main Geographical Features Scotland at the Time of the Wars of Independence The Highland Clearances	Food From Other Lands **Farming in Other Lands**
P6 Our Means of Travel Our Means Of Communication Journeys We Make Our Motor Car	Our City – a Centre of Communication Our City in Victorian Times Growth of the City	Motorways in Britain Transport Revolution 1750-1850 Britain – Main Geographical Features The Motor Industry	The History of Discovery and Exploration
P7 Looking After Ourselves – Keeping Safe, Fit, Healthy and Warm Our Leisure/Recreation Our Help to Others	Looking After Our Neighbourhood Leisure Provision Welfare Services Our City/Links with other Countries	Holidays in the UK Britain at War – World War 11 Fuel and Power for Home and Industry British Industry Today	Holidays in Europe Europe – General Features The European Economic Community A Commonwealth or World Power

(Source SCES 1984)

APPENDIX 3.3- PEDP Details of fields of study

"Places and Spaces": The Physical Environment Ideas issues and themes which relate to the natural and created environment in which we and others live, the materials around us and the importance of energy in our lives.

"Looking Backwards and Forwards": Past and Future Environments. Ideas, issues and themes which relate to people and societies of the past, their economic, political and social environments and the implications for future events.

"How we live together": The Social Environment. Ideas, issues and themes which relate to how we and others decide upon and organise our lives and live together.'

"Looking In and Around": The Living Environment. The ideas, issues and themes which relate to ourselves and other living things in our environment and the way in which we secure a healthy and safe environment and healthy life.
(PEDP draft 6 1988)

APPENDIX 3.4 – Lothian Regional Council - Topics

	Inner City School	**Outer City School**	**Town School**	**Rural School**
P4	Local Environment	Local Environment	Local Shopping/Street Survey	**Farm Study** *(Causes/ Consequences)*
	A Village Study	A Village Study	Local History	Village/Small Town Study
	Seashore and Coast	Seashore and Coast	**Farm Study** *(Interdependence)*	Seashore and Coast
P5	Transport in the City	Transport in the City	Village Study	A Woodland *(Interdependence)*
	Old Edinburgh	Old Edinburgh	Transport	Life in the Middle Ages
	Farm Study *(Interdependence)*	**Farm Study** *(Interdependence)*	Seashore and Coast	Transport
P6	Fuel and Power	Fuel and Power	Fuel and Power	Fuel and Power
	Communications	Communications	Communications	Growth of the City
	A Woodland *(Similarity/ Difference)*	A Woodland *(Interdependence)*	A Woodland *(Similarity/ Difference*	Our Oral History
P7	Growth of the City	Growth of the City	Growth of the City	A River
	A River	A River	A River	Communications
	Our Community	Our Community	Our Community	Our Parish/ Community

(Adapted from Lothian Regional Council, Department of Education, Advisory Service Division, Environmental Studies Policy 1986 p21-22)

APPENDIX 3.5 - Lothian Regional Council – A Farm Study

A Farm Study

Again part of the treatment would be common to all schools – basic vocabulary (eg crops and their recognition, animals, such terms and processes as drilling, harvesting, crop rotation, etc.) the notion that the farmer is a producer of food and raw materials, relationship between the way the land is used and eg. climate/exposure and aspect, slopes, soil types, distance of markets, etc.

Emphasis and treatment will vary according to the basic concept, thus:

Causes and Consequences (Rural School)

i) Choice of crop-soil, weather, climate, labour.

ii) Improving the soil-humus, lime, fertiliser, drainage, rotation, protection (eg windbreaks).

iii) Effect of market – dairying, market gardening near towns, vegetables and freezer plants, garden centres, breweries, distilleries, livestock for fattening or slaughter, broilers.

iv) Helping the farmer – research stations, agricultural engineers, spraying etc. contractors, the vet.

v) Town meets country – problems of urban visitor, litter, crop damage etc. roadside milk bars, flowers and plant stalls etc..

Interdependence (City and small Town Schools)

i) Food chain – crops and grass, animals, farmer, middlemen, us. We need food. Farmer needs other people to help him produce food.

ii) Soil, weather, climate etc. – helped by manufacturers of lime, fertilisers, drainage tiles, forester, weather forecaster etc..

iii) Effect of market – testing, grading, parking, transport, research. Homegrown or foreign imports?

iv) Town meets Country – markets, industries, services eg. Shopping, garages, repairs, schools, visiting the country, Country Code, care of the countryside, commuters.

The farmer's team – members, work, wages, homes.

APPENDIX 3.6 – Tayside Regional Council – Topic Framework

Places and Spaces	**Looking Back and To the Future**
How people travel	Transport through the ages
Crossings	Travel in the future
Motorways and By-Passes	Destinations
Routeways	Inventors and Inventions
Docks	Heroes and Heroines
Airports	Disasters, Accidents and Rescuers
Stations	
How we live together	**Looking in and around**
Bus to town	Power to travel
Binmen	Moving around
Street Furniture	Pollution
Mechanic	Drivers and Pilots
Roads and Roadways	Floating and Sinking
Road Safety	Flight
Impact of Tourism	Things on wheels
Disasters and Famines	
Distribution of Relief	
Trading Routes	
Trade and Communications	

(Source Tayside Regional Council 1989)

APPENDIX 3.7 – Moray House College of Education – Farming Topic

Farming is a major industry in Scotland and is a synthesis of many influences

1. A farmer is in business to make a profit
   - Farms are not playgrounds, they are "open air" food and raw material "factories.
   - Many farmers save time, labour and money by using machinery.
   - Farmers can increase their profits by using new varieties of crops and animals bred specially for their purpose, by (leafless peas for freezing, crossbred cattle for more milk, short stalk barley).
   - Farmers can assist Nature by protecting plants and animals against extreme of weather and climate.
   - Farmers are producers of raw materials for industry.
   - Farmers can only survive if they get a fair return for their work.
   - A good farmer cares for the soil as far as the need for profit permits.
   - A good farmer conserves and increases fertility of the land.
   - If a farmer produces a variety of crops, including animals, he is likely to have a more secure income (Not 'All eggs in one basket...')

2. We are dependent on the work of the farmer.
   - Farmers generally choose to grow these crops from which they expect to make most money.
   - Food production is the most basic of all industries – and is the conversion of sunlight into usable energy.
   - We need in order to support our metabolism.
   - Home grown food helps to save foreign exchange.
   - Many industries use agricultural products as raw materials.
   - Science and technology have not yet replaced natural food production by synthesis.
   - Food producers are linked by a chain of markets, middlemen and transport to consumers.

3. Farmers are in turn dependent on nature, the market and on other factors
    - Choice of crop is often limited by soil, weather and climate.
    - Choice is also limited by: a) labour available, b) money for investment, c) likely profit, d) government policy.
    - Food producers are linked by a chain of markets, middlemen and transport to the consumers.
    - Farmers can only survive if they get a fair return for their work.
    - Soil is wealth and needs to be cared for (conserved).
    - This can be done by: a) adding fertilisers, b) adding humus, c) adding lime, d) rotating crops from year to year, e) draining away surplus water, f) protecting it from wind and water erosion.
    - A farmer and his labour force are (a team) dependent on each other (for work done, wages paid, house provide, crops sold, skills used).
    - A farmer's work throughout the year is usually affected by changing seasons.

4. Farming activities assume patterns in space and these patterns change with time.
    - Proximity to market can effect style of farming.
    - Farming patterns may include some response to climate patterns.
    - Farming patterns may include a response to geological/landform patterns.
    - Government intervention in the form of subsidy can change farming practice.
    - Farms tend to group together into zones of similar types.

5. Farming has profound effects on landscape but these are not immutable.
- To improve land a farmer may have to drain it, and drains fill up again.
- A farmer may have to erect barriers to protect his "open air factory".
- Devices to protect plants and animals become landscape objects.
- Bad farming practices can result in erosion.
- A farmer has a custodial role to play.
- Types of farming develop landscape personalities and these are arranged in patterns of space.

- Changes in farming practice and the landscape may result from technological developments.
- Intensive farming often needs modern buildings and these may not be aesthetically pleasing.
- As farming becomes more intensive – useless and decorative landscape objects may need to be removed.

Appendix 3.8 Craigie College of Education – Farming Topic

Unit 4 of the Bed Environmental Studies Course dealt with Food and Farming. This unit concentrated on local farms and farming in other lands. It used the concepts of: Causes and Consequences for a rural school

1. Choice of crop-soil, weather, climate, labour, capital and expected profit, government policy.
2. Improving the soil-humus, lime, fertilser, drainage, rotation, protection (eg windbreaks).
3. Effect of market – dairying, market gardening near towns, vegetables and freezer plants, garden centres, breweries, distilleries, livestock, for fattening or slaughter, broilers.
4. Helping the farmer – research stations, agricultural engineers, spraying etc., roadside milk bars, flower and plant stalls etc..

Interdependence (City and small Town Schools)

1. Food chain – crops and grass, animals, farmer, middlemen, us. We need food. Farmer needs other people to help him produce food.
2. Soil, weather, climate etc. – helped by manufacturers of lime, fertilisers, drainage tiles, forester, weather forecaster etc..
3. Effect of market – testing, grading, parking, transport, research. Homegrown or foreign imports.
4. Town meets country – markets, industries, services eg shopping, garages, repairs, schools, visiting the country, Country Code, care of the countryside, commuters.
5. The farmer's team – members, work, wages, homes.

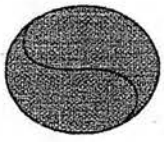
(Craigie College of Education 1988)

Appendix 5.1 – Proposed Structure of 5-14 Environmental Studies Curriculum

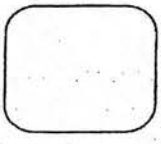
Source:SOED Working Paper No 13 1991:13

This section develops all of the attainment outcomes identified on pages 7 and 8. They are numbered from one to seven and are arranged as follows :

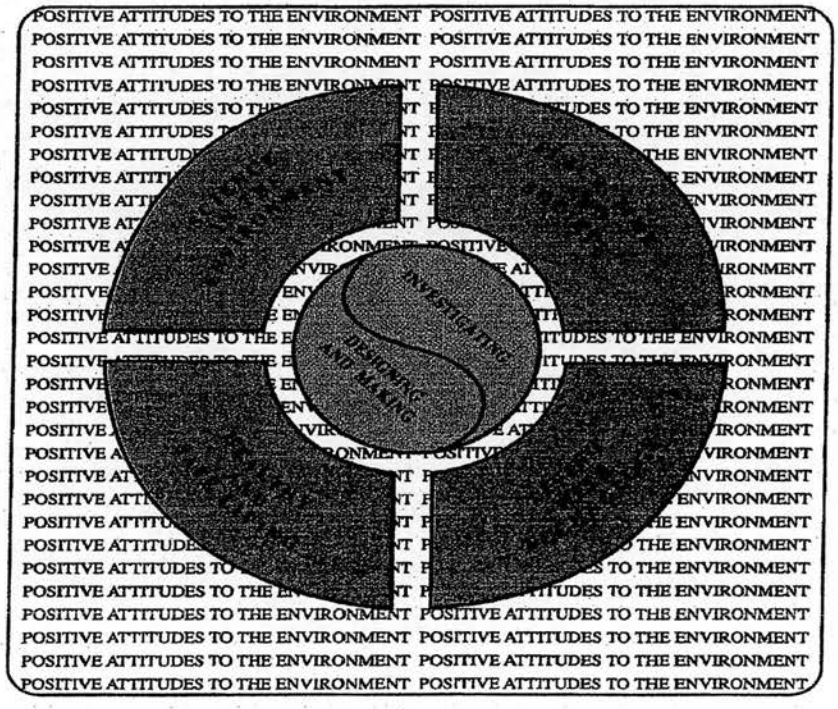
Knowledge and understanding outcomes pp 15-45



skills outcomes developed across all of the above outcomes pp 47-55



All of the knowledge and understanding and skills outcomes contribute to the development of this outcome pp 56-57



Appendix 5.2 Proposed Attainment targets for 5-14 Environmental Studies Curriculum

Working Paper 13 – Proposed Attainment Targets

Attainment Outcome 1 – Science in the Environment

Statement of Outcomes

Pupils should have a knowledge and understanding of:

- the variety of living things – including humans; the principal processes of life; care and conservation and the interdependence of living things and their environment.
- energy and forces in their various forms; properties of materials and their interaction in ways which may be predictable.
- various aspects of the physical world; some of the major processes, including weather and climate; relationships between the physical and human world

Strands

Living Things	Energy	Planet Earth
Processes of Life	Forces	Weather and Climate
Materials	Conservation and Care of Living Things	

Attainment Outcome 2- Place, Time and Society

Statement of Outcomes

Pupils should have a knowledge and understanding of:

- the role of place in the lives of people; its different characteristics; people and activities which are associated with place and the links between places; the ways in which maps can be used to learn about place;
- time and the influence of events and decisions of the past on the present; the process of change and the role of cause and effect in explaining historical change;
- how people work together and/or compete with each other to satisfy their needs; the rights and responsibilities of individuals (including themselves) and groups in a complex global society.

Strands

People and Place	People in Time	Needs and Society
Journeys and Movements	People and Heritage	Rights and Responsibilities
Understanding Maps	People and Change	Decision Making and Rules
Cause and Effect	Conflict and its Resolution	

Attainment Outcome 3 – Living with Technology

Statement of Outcomes

Pupils should have a knowledge and understanding that people can satisfy some of their needs and improve their quality of life through the use and control of technology

Strands

Technology and Needs	Technology, Design and Control
Information Technology	Effects of Technology

Attainment Outcome 4 – Healthy and Safe Living

Statement of Outcomes

Pupils should have a knowledge and understanding that health is concerned with quality of life and reflects the inter-related aspects of physical, mental and social well-being; that enhancement of self-esteem should be the central focus in developing attitudes towards health, enabling pupils to make informed decisions and take more responsibility for themselves.

Strands

Looking After Myself	Relationships	My Environment

Attainment Outcome 5 – Investigating

Statement of Outcomes

In the process of investigating, pupils will develop and use skills which will involve them, both individually and in co-operation with others, in identifying issues to be investigated: in planning and implementing, enquiries with both primary and secondary source materials; in making appropriate records of their findings; in

evaluating and interpreting the evidence obtained and in presenting their findings to others.

Strands

Planning Interpreting Finding Out Reporting Recording

Attainment Outcome 6 – Designing and Making

Statement of Outcomes

In the process of Designing and Making, pupils will develop and use skills which will involve them, both individually and in co-operation with others, in devising solutions to meet specific requirements or creating artifacts of appropriate form and function. This will involve planning, applying relevant knowledge, making modifications where necessary and presenting solutions and creations.

Strands

Planning Evaluating Making Presenting

Attainment Outcome 7 – Positive Attitudes to the Environment

Statement of outcome:

Pupils should be encouraged to enjoy, care for and take responsibility for the environment at all levels-personal and social, local and global. They should also develop a commitment to environmental stewardship and the maintenance of the quality of what exists for the present and the future. The emphasis throughout this outcome should be on enabling pupils to take an informed and active position in relation to environmental issues.

Appendix 5.3 Aims of Attainment Outcome 7 – Positive attitudes to the environment

Scientific Studies and Applications	Social and Environmental Studies	Technological Activities and Applications
• to recognise and accept their environment as a source of pleasure and recreation	• to recognise and value the resources for pleasure and recreation in their local environment	• To demonstrate sensitivity to the effect of decisions about the environment on the social and economic concerns of others
• To acknowledge the need for rules for the maintenance of their own immediate environment	• To acknowledge their own responsibility to care for their own environment	• To participate in activities which make a positive contribution to shaping the environment
• To help to look after other living things	• To participate in planned activities aimed at caring for the environment within and outwith school	• To acknowledge and take into account in personal decisions, the environmental implications of their own decisions
• To avoid waste and take part in activities designed to conserve resources	• To evaluate changes in the local community in terms of their environmental implications	• To develop a critical and enquiring attitude to evidence on environmental isssues
• To acknowledge that their own behaviour affects the environment	• To take into account environmental and economic factors in thinking about the uses of materials and technology	• To acknowledge their responsibility for the environment as citizens in their own community and the wider national and global context • To accept the implications of democratic decision making, including contributing to and observing decisions about environmental issues • To recognise their responsibilities, as consumers, for the environmental implications of their decisions • To recognise their responsibilities, as citizens, for the environmental implications of decisions in which they participate

(SOED 1991 p57)

Appendix 5.4a – Examples of Responses from Local Authorities to Working Paper 13

The following are extracts from detailed documents, often produced by members of staff and approved by the relevant council committees.

Lothian Regional Council

- The document is welcomed as providing a detailed framework for development and discussion which will result in the pupil experience in this curricular area being more clearly defined and enhanced.
- The structure provided allows for progression and continuity while underlining the importance of coherence and collaboration in planning across the knowledge and understanding outcomes. This approach is welcomed.
- The rationale, while outlining a sound philosophy for Environmental Studies, would benefit from a clearer exposition.
- The arrangements for targets, however, in bands A-E is not considered to be helpful in clearly defining progression. It is a major recommendation of this response that a more useful arrangement would be for targets to be arranged in 3 broad bands matching a planning cycle of P1-3;P4-6;P7-S2.
- The commitment to a variety of methodologies is welcomed as is the advice on planning.
- The provision of resources is thought to be crucial for the successful implementation of this report.

(Lothian Regional Council Department of Education Curriculum and Assessment in Scotland A Policy for the 90s, A Response to the Working Paper No. 13 'Environmental Studies 5-14')

Western Isles

There is a fairly major difference of opinion about the need for individual subject areas to figure distinctively in the later stages of primary. The majority of teachers endorsed this view and similarly agreed that a subject based curriculum is very helpful in providing continuity between late primary and early secondary.

The Curriculum Group however felt that this response was likely to be the result of primary teachers lacking confidence in certain areas of the curriculum. Working Paper No.13 is a document that will require considerable effort to implement in the classroom and the understandable reaction of teachers is to hope that those aspects of the reports that they may be unfamiliar with, will be covered by separate subject areas.

The Curriculum Group continues to endorse the thematic approach in upper primary. To assist primary teachers in areas of the curriculum in which they lack confidence, the Group suggests that specialist subject teachers should provide support to the thematic model of teaching. In particular, Science and Technology are subject areas in which this support should be available. The model which is already in place in the Western Isles with Home Economics Teachers should be adopted by providing itinerant Science and Technology Teachers. This has staffing and staff development implications. And would require to be recognised by way of financial support to authorities.

Western Isles Teachers identified a need for more detailed advice setting out for each subject the element of knowledge and understanding with which children should be familiar.
(Western Isles Island Council Education Department, Responses to Working Paper No. 13 Environmental Studies)

Central Region

General Comments

(i) The Working Paper on Environmental Studies and related secondary modes is a welcome part of the Curriculum and Assessment 5-14 Programme.

(ii) For a considerable time there has been lack of continuity and progression in the area of Environmental studies across the two sectors

(iii) The consultative period for the document is in line with that for other 5-14 Working Papers – excluding Reporting 5-14. This allows for an adequate period of consultation which is welcomed.

(iv) It is recognised that the Review and Development Group on Environmental Studies had a hard task. This Working Paper was required to pick up curricular areas not covered in any other document.

(v) It is recognised that RDG3 genuinely tried to look at these curricular areas using a cross curricular approach while allowing for discrete subject teaching where appropriate.

(vi) The Paper recognises existing good practice and at the same time that the development needed has to be linked with both Staff Development and the provision of appropriate resources.

(vii) The Paper recognises the problems of Primary teachers in trying to deal with the whole area of 'Environmental Studies'.

(viii) One of the strengths of Working Paper No13 is that it has attempted to tackle curricular areas which had been somewhat neglected in the Primary School, eg Science and Technology.

(ix) In the two skills' outcomes "Investigating" and "Designing and Making" emphasis has been on practical, first-hand experiences and this is welcomed.

(x) Throughout the paper, but particularly in the section on design criteria, an agenda is provided for collaboration between Primary and Secondary Schools, within Primary and Secondary schools and among associated Primary schools.

(xi) The Paper in its present form is not very user friendly.

(xii) There is some concern about the relationship between Working Paper No. 13 and Standard Grade. There are still problems about general approach and overlap of content.

(xiii) Relationships between knowledge, understanding and skills are not well presented.

(xiv) Health and Safety issues have not been dealt with in terms of practical work in Primary Classes. There are still problems related to class size, lack of technical support and outside visits.

(xv) There is concern that the paper in parts lacks specificity and that the Design Criteria as given are not adequate.

(xvi) Some of the examples given in Working Paper 13 are not helpful.

(xvii) There is a need to look at the rate of implementation of the Paper. Timing for the two sectors is important

(xviii) Secondary schools may now be hesitant to take on board some of the advice in the Paper because of the Howie Report[1]

(xix) There is concern about the number of Targets.

(Central Regional Council Education Department, Responses to Working Paper No.13 Environmental Studies 5-14 1992)

[1] Howie Report – Upper Secondary Education in Scotland 1992

Appendix 5.4b – Local authority comments relevant to farming

Attainment Outcome	Strand	Level	Lothian	Central	Western Isles
1.Science in the Environment	Conservation and Care of Living Things	C1/D1/E 1	In general the targets are thought to be too much about food processing and not enough about conservation and care. E2 should become E2 for coherence.	Where no clear example of progression has been identified, it would be better simply to omit D1. Its inclusion, consisting of only one example leads to confusion	No specific comment
2. Place, Time and Society	Journeys and Movement	C	No specific comment	Examples are difficult	No specific comments
3. Living with Technology	Effects of Technology	B	No specific comment	No comment	No specific comments
7. Positive Attitudes to the Environment			The model used of identifying three broad bands of progression is appropriate and might profitably be extended to all Attainment Outcomes. The layout, however, is confusing. It is not clear whether the page is to be read vertically or horizontally.	This Attainment Outcome underpins the philosophy of Environmental Studies and as such should be the first Attainment Outcome in Section 3 As the development of Positive Attitudes is of crucial importance there is concern that not enough guidance has been given to enable teachers to take this forward. There is concern that 'positive' is an inappropriate term and that 'informed' might be more	The group endorsed the statements in terms of aims.

				suitable. The opportunity to highlight inter-relationships has been missed. The layout of p57 is confusing. It looks like the headings at the top relate to individual levels.	

Appendix 5.5 Framework of 5-14 Environmental Studies Curriculum

(Source:The Scottish Office Education Department, (1993), Curriculum and Assessment in Scotland National Guidelines, Environmental Studies 5-14)

Appendix 5.6 Comparison of terminology and attainment targets between working Paper No. 13 and 5-14 Environmental Studies Curriculum

Working Paper 13		5-14 Guidelines	
Attainment Outcome 1: **Science in the Environment**		**Science**	
Statement of Outcome Pupils should have a knowledge and understanding of:: • the variety of living things • Energy and Forces • Various aspects of the physical earth	**Strands** Living Things Processes of Life Conservation and Care of Living Things Energy Forces Materials Planet Earth Weather and Climate	**Attainment Outcomes** Understanding Living things and the Processes of Life Understanding Energy and Forces Understanding Earth and Space	**Strands** Knowledge and Understanding Planning Collecting Evidence Recording and Presenting Interpreting and Evaluating Developing Informed Attitudes
Attainment Outcome 2: **Place, Time and Society**		Social Subjects	
Statement of Outcome Pupils should have a knowledge and understanding of:: • The role of place in peoples lives • Time and the influence of events and decisions of the past on the present • How people work together and/or complete with each other to satisfy their needs	**Strands** People and Place Journeys and Movements Understanding Maps People in Time People and Heritage People and Change Cause and Effect Needs and Society Rights and Responsibility Decision Making and Rules Conflict and its Resolution	**Attainment Outcomes** Understanding People and Place Understanding People in the Past Understanding People in Society	**Strands** Knowledge and Understanding Planning Collecting Evidence Recording and Presenting Interpreting and Evaluating Developing Informed Attitudes

Working Paper 13		5-14 Guidelines	
Attainment Outcome 3 : Living with Technology		Technology	
Statement of Outcome: Pupils should have knowledge and understanding that people cam satisfy some of their needs and improve their quality of life through the use and control of technology.	**Strands** Technology and Needs Information Technology Technology Design and Control Effects of Technology	**Attainment Outcomes** Understanding and Using Technology in Society Understanding and Using the Design Process	**Strands** Knowledge and Understanding Planning Collecting Evidence Recording and Presenting Interpreting and Evaluating Developing Informed Attitudes
Attainment Outcome 4: Healthy and Safe Living		**Health Education**	
Statement of Outcome: Pupils should have knowledge and understanding that health is concerned with quality of life and reflects the inter-related aspects of physical, mental and social well being; that enhancement of self-esteem should be the central focus in developing attitudes towards health, enabling pupils to make informed decisions and take more responsibility for themselves.	**Strands** Looking After Myself Relationships My Environment	**Attainment Outcomes** Healthy and Safe Living	**Strands** Knowledge and Understanding Taking Action on Health
Attainment Outcome 5: Investigating			
Statement of Outcomes In the process of investigating , pupils will develop and use skills which will involve them, both individually and in cooperation with others, in identifying issues to be investigated...	**Strands** Planning Finding Out Recording Interpreting Reporting		

Attainment Outcome 6: Designing and Making			
Statement of Outcomes In the process of designing and making pupils will develop and use skills which will involve them both individually and in co-operation with others, in devising solutions to meet specific requirements…	**Strands** Planning Making Evaluating Presenting		
Attainment Outcome 7: **Positive Attitudes to the Environment**			
Statement of Outcomes Pupils should be encouraged to enjoy, care for and take responsibility for the environment at all levels – personal and social, local and global.			
		Information Technology	
		Attainment Outcomes Understanding and Using Information Technology	**Strands** Knowledge and Understanding Using Information Technology

Appendix 5.7 - Examples from various schools of use of farming as a topic in the 5-14 Environmental Studies curriculum

Learning Activities eg. Line of enquiry Storyline (including Key Questions)	The Farm - P5/6 KNOWLEDGE/UNDERSTANDING	5 to 14 Attainment Targets in PLANNING	in COLLECTING EVIDENCE	in RECORDING AND PRESENTING	in INTERPRETING AND EVALUATING	ORGANISATION	ASSESSMENT OPPORTUNITIES
1 What is a farm? What do farms do?	the pupils will ->>>>>>>	the pupils will ->>>>>>>	the pupils will ->>>>>.	the pupils will ->>>>>.	the pupils will ->>>>.		
	study how farms have developed and why we need them. awareness of inputs and outputs of farms. farming in holy land.	answer questions about farms and their purpose.	collect information from TV, books etc and from personal knowledge.	complete worksheets and write about why we have farms. - use in display	identify how farms developed and their function.	class	Pre-topic assessment
2 What animals and crops do local farms have?	study the types of animals - cattle, sheep, poultry etc. kept on local farms. understand what crops are grown locally and what they are used for. eg. silage for animal feed, wheat for bread.	answer questions about local animals and crops. plan visits to farms in district.	collate information from booklets and visit with photographs to form basis for a display	make display with description of animals and crops. use information for a database worksheets.	describe local farm animals and crops	class and groups	a quiz to assess knowledge of farm animals and crops (Individual)
3 What does a farm look like ?	find out about different types of farm buildings and what they are used for. eg. barns for storing hay	study layouts of farms - show knowledge of buildings, fields and facilities needed to make up farm.	make drawings, plans and models. experiment with different types of farm.	build a model farm or draw a plan for display	answer questions about plan or model.	4 groups	assess work on model or plan.
4 What is the farmers 'year about'? What are natural cycles and food chains?	learn about the four seasons and the different kinds of work on the farm at those times. study animal and crop cycles - growth, birth and death and food chains. discovering herbivores, carnivores and omnivores.	suggest questions to ask farmers about their work in each season. also about cycles and food taken by animals.	collate information about seasons and cycles etc. for display - make tables of information ie. milk yields etc.	produce four seasons friezes and booklets with computer wp describing farming in area.	explain work on farm and effect of different seasons.	4 groups	assess work on friezes and booklets (group)
5 How do people feel about working on the farm?	recognise that different jobs have to be done each day to keep farm running. list the jobs and discuss them.	suggest questions to ask on visit about farm work.	observe farm work on visit and collect information by asking questions. find out about farm music or songs.	write or record description of work on a farm. or act story. listen to music sing songs	describe stories about farm life or dramatisation or musical presentation.	class and groups	assess drama and music
6 Safety on the farm use of machinery? Why do we have to be careful?	discuss why we have to be safety conscious on farms. learn country code. study machinery used on farms and how to use it safely - ploughs, tractors, milking machines etc.	plan questions and what to study and take note of on farm visits. ie use of milking machine or country code.	follow country code on visit and make notes about safety on the farm.	make display of country code. write about safety with machinery for display	answer questions about country code.	class	a quiz to assess knowledge of country code. (Individual)
7 Would I like to live/work on a farm?	discuss what life is like on a farm.	plan survey of class	collate best information.	complete survey with graph	evaluate survey	class	self-assessment questions.

Forward Planning Sheet/
Record of Work

Eastfield Primary School

Environmental Studies

Session 199 /
Term Aug-Oct ☐
Oct-Dec ☐
Jan-Mar ☐
Apr-Jun ☐

Class P 3/4/5 Teacher Mrs Lampshire

Study Title LIFE ON A FARM.

Main Theme ☐ Mini- theme ☐ Lesson ☐

Aims

Aims as on previous page

To gain knowledge and understanding of farming in our area through a visit from our Link Farmer.

Main Component	Science	☑
	Social Subjects	☑
Key Features/ Strands	Technology	☑
	Health Education	☑
	Info. Technology	☑

See previous page

Any other Component and Strand

Language

Key Questions and Activities	Assessment	Resources
WHAT IS FARMING LIKE TODAY ? Types of farming :- dairy, sheep, poultry,etc. Deer, ostrich etc. Crops : root crops, grains, etc. Fruit Farming. Fish Farming. Reasons for types of farming : eg. Location, soil type, altitude, weather, etc. Crofts. Farming machinery. Research and recording / illustrations. Class / group discussions.	Contributing to class discussions. Listening skills. Answering questions. Research and recording skills. Appropriate illustrations.	Resources from the Public Library Service for Schools. "Let's Explore Farming" (Primary Science & Technology) Visit from our Link Farmer. Visit to our Link Farm. Combined visit to The Royal Highland Show and The Scottish Agricultural Museum, Ingliston. Poems based on the topic.
Computer programs.	Use of computer programs. Gathering information.	Continued overleaf :-
		Evaluation
Poems read to class. Children to write their own poems on the topic.	Poem	
Visit to The Royal Highland Show :- to observe the "Best" farm animals of the year / Animal and skills competitions and exhibitions / The most modern machinery / The food produced from farms and marketed as "the end product' / Crafts etc. See brochure. Written account of the visit to the show.	Account of visit.	

Midlothian Council
P.Lampshire. 1/8/96
Eastfield Primary ©

APPENDIX 5.8 Example of Farming as a cross-curricular topic

Harthill Primary School

Rationale – To develop a study of farming using the key questions outlined in the topic plan as a basis. The children will develop awareness of Language at level C of the 5-14 Report by developing writing, poetry, investigating cloze procedure and completing simple interpretations. These activities involve reading, writing, listening and talking. Listening and talking are further developed by listening to the teachers, the farmers and workers taking part in the farm visits. The final presentation also involves listening and talking. Maths at Level C of the 5-14 is developed in the measurement on the farm ie acres and litres; the production of attitude graphs and compliation of a simple database. There are a host of Environmental Studies activities at Level C, including Farm Visits, study of farming seasons, awareness of the country code, worksheets, wordsearches and questionnaires recording information. Expressive Arts at Level C include collage, painting and model making. The final presentation involves dramatic skills and music. Religious and Moral Education is involved in the comparison of farming today and in biblical times. Personal and Social Development is involved in the presentation and in taking part in various activities ie on visits learning to deal with the public.

Aims-

1. To develop a study of the local farming environment in relation to seasonal change.
2. To progress the children's awareness of Science and Technology and other attainment outcomes as in the Topic Summary at Level C of 5-14 Report in relation to Farm Study.
3. To develop children's Personal and Social Development in taking part in visits, presentations and activities concerned with the farm.
4. To create Language Development at Level C of 5-14 Report in relation to the topic.
5. To develop aspects of Maths at Level C of 5-14 Report in relation to the topic.
6. To develop aspects of Expressive Arts at Level C of 5-14 Report in relation to the topic.
7. To progress comparison of then and now in RE at Level C of the 5-14 Report.

Outcomes – the children will develop –

1. Knowledge of farms in the area and farming throughout the seasons.
2. Knowledge of the Country Code and behavior on farms.
3. Knowledge of attitudes and values of farmers and people who live in the countryside.
4. Skills in Language in writing and recording experiences.
5. Skills in Mathematics of geographical recording especially through database.
6. Knowledge of farming now and in the past (RE)
7. Skills of Expressive Arts – drawing, making collages, modelling, singing and exercising.
8. Positive attitudes and values towards farming through understanding of country code, through visits and collation of information about how they feel about farm work.

(Source: Harthill Primary school – part of submission to the Schools Shield Competition 1995)

Appendix 5.9 Example of interpretation of topic – Lothian Regional Council

Key Features of a Programme for Stages P4 to P6

Science: Understanding Living Things and the Processes of Life

In developing a progressively deeper knowledge and understanding of living things and the processes of life, pupils should be given opportunities to observe and investigate plants and animals in the classroom, school and community. In addition they should carry out fieldwork in the immediate vicinity of the school and pay visits to nearby locations such as seashore, woodland, park or pond or to suitable industries. Studies should provide pupils with experience of living material, artefacts and scientific equipment, complemented by the use of audio-visual and reference materials, with first-hand experience predominating at all stages but especially at the early stages. Examples are provided at some points to give an indication of the depth of treatment but are not intended to be restrictive and additional examples can be included where appropriate. Studies should focus on:

	Existing topics which include or could include this focus
Variety and characteristic features	
O the main distinguishing features of vertebrates (fish, amphibians, reptiles, birds and mammals), major invertebrate groups (worms, molluscs, arthropods such as insects, spiders and crabs), flowering and non-flowering plants	
O recognising and naming some members of these groups using simple keys	
O similarities and differences between plants and animals of the same species, *eg leaf shape, breeds of dog*	
The processes of life	
O the structure and functions of the major parts of the body as they relate to the processes of movement (muscle, bones and joints) and nutrition (teeth and digestive system)	
O the structure and functions of the parts of flowering plants (roots, stem, leaves, flowers) and factors which affect germination and growth	
O dispersal of fruits and seeds by animals (externally/internally), by wind and by self	
Interaction of living things with their environment	
O the interaction between humans and their environment in relation to aspects such as farming, fishing and other local industries	
O simple food chains based on energy from the sun	
O the importance of conservation and of the value of recycling materials	
O living things which are very rare or which have become extinct, *eg protected species, dinosaurs*	
O how plants and animals are affected by environmental conditions such as light/shade, dry/moist, hot/cold	

Appendix 5.10– Whole School Framework – Fife Regional Council

SCHOOL FRAMEWORK

ENVIRONMENTAL STUDIES 5-14

STAGES	P1	P2	P3	P4	P5	P6	P7
SIX THEMES	Shops and Shopping	The Immediate Environment	Getting About	Journeys	Local Study - Geographical	People and Places	The World in the News
	School	Family and Friends	People Who Help Us	Local Study - Historical	Community Life	People in the Past	People in the Past - Scotland
	Myself 1	Myself 2	Myself 3	Living Things	Personal Health and Relationships	Conservation and Pollution	Living and Growing
	Seasons 1	Seasons 2	Seasons 3	Energy 1	Forces	Energy 2	Life on Earth
	Clothes	Homes	Toys	Food Packaging	Earth Materials and the Solar System	Technology in Action	Our Earth in Space
	Design and Make I	Design and Make I	Design and Make I	Design and Make II	Design and Make II	Design and Make II	Design and Make III
OPTION							
OPTION							

APPENDIX 5.11 Contents of SCCC Curriculum File 1988

No. 8 May 1998

Contents:

General

- Scottish History in the Curriculum: a Statement of Position from Scottish CCC
- 5-14 Environmental Studies: Science Catalogue on CCC's website – Information
- Supporting Teaching for Effective Learning – Information and Order Form
- Enterprising Schools: Case Studies of Successful Schools – Information and Order Form
- Copies of Review – CCC's newsletter for schools
- Opportunities to order a variety of 5-14 materials from Scottish CCC and other agencies
- An updated Checklist of nationally produced materials for 5-14
- An updated Voucher Checklist itemising all vouchers for free materials issued through curriculum file to date.

Environmental Studies Section

Non-SCCC material

- The National Trust for Scotland – information on NTS resources and facilities for schools
- Scottish Library Association publications – Information and Order Form
- Forest Education Initiative – Information about a new publication, *Only Made of Wood*
- Living Water Charitable Trust – Information about the *Beo* game and Order Form
- Grounds for Learning – Information about their membership scheme
- The Royal Bank of Scotland – Information about a CD-ROM entitled *Past Lives: A Royal Bank Account*
- Scottish Power *Bright Sparks* video and *Safety for Children* booklet – Information and Order form

- Scottish Wildlife Trust – Information about resources and activities
- The Scottish Farm and Countryside Educational Trust – Information about resources and activities
- Scottish Environmental Education Council – Information about resources on environmental education for young children

National Museums of Scotland, Ireland and Denmark – Advance information about CD-ROM entitled *Looking at Vikings*

Peel Primary School Environmental Studies Programme

	Autumn Term (1)		Autumn Term (2)		Winter Term		Spring/Summer Term		
P1	Module	Myself My School My Family	Module	Personal Safety	Module	Houses /Homes Farm Animals	Module	Pets	RE Other World Rel.
P2	Module	People Who Help Us	Module	Children of Other Lands	Module	Lighthouse Keeper	Module	Transport	RE Other World Rel.
P3	Module	Senses	Module	Looking After Myself Mr McBurr	Module	Toys	Module	Islands	RE Other World Rel.
P4	Module	Food and Shopping	Module	Town Study Contrast in Britain Series of lessons on sound	Module	Farming	Module	Early People Series of lessons on geography of Scotland	RE Other World Rel.
P5	Module	Livingston	Module	Kenya	Module	My Body Series of lessons, colour, reflected light	Module	The Mediaeval Burgh	RE Other World Rel.
P6	Module	River Study + contrast, e.g. Rhine	Module	Industrial Revolution Share Oil Industry	Module	Feeling Yes, Feeling No	Module	Fuel and Energy today, to include electricity and magnetism	RE Other World Rel.
P7	Module, to run concurrently with Edinburgh, Festival visit, and city study		Module	Series of lessons on the World, physical features, time zones, resources	Module	Japan Series of lessons on drugs, AIDS, media, advertising	Module	Personal Passport	RE Other World Rel.

APPENDIX 5.13 – Review of 5-14 Environmental Studies Guidelines – summary of questionnaire

The following is a summary of the contents of this questionnaire

Context

'the review aims to:

- Assist teachers in implementing the guidelines and so enhance pupil attainment
- Provide clearer exemplification of learning and teaching in Environmental Studies
- Provide better and simpler specification of attainment targets and
- Make planning and assessment of Environmental Studies more manageable.

Statements

- A revised framework for Environmental Studies should comprise only Science, Social Subjects and Technology, with Health Education and Information Technology located elsewhere in the curriculum.
- Information technology should be re-described as a key permeating element across the 5-14 curriculum in order to reflect its growing importance to learning and teaching.
- Health education should become more closely associated with pupils' Personal and Social Development. These two areas should be consolidated to establish an important part of the 5-14 curriculum with a specific allocation of time.
- The Attainment Outcomes in Science, Social Subjects and Technology are:

Science	Understanding Living Things and the Processes of Life
	Understanding Energy and Forces
	Understanding Earth and Space
Social Subjects	Understanding People and Place
	Understanding People in the Past
	Understanding People in Society

Technology	Understanding and Using Technology in Society
	Understanding and Using the Design Process

These should remain unchanged as the main organisers for planning, teaching and assessment.

- In order to ease the planning and assessment process in Science, Social Subjects and Technology, the number of Strands should be reduced from six to three,i.e. Knowledge and Understanding, Skills and Developing Informed Attitudes.
- There should be a single Skills Strand to incorporate the current strands of planning, collecting evidence, recording and presenting, applying skills and presenting solutions, and interpreting and evaluating.
- The Strand 'Developing Informed Attitudes' should remain as it is currently described, i.e.as an important permeating element within Environmental Studies.
- The Strand 'Knowledge and Understanding' within current Guidelines does not provide sufficiently clear specification of content or progression.
- The content described at present within Key Features should instead be developed to provide a more clearly defined Knowledge and Understanding Strand.
- Some elements of knowledge and understanding contained within the present Key Features should be removed to focus on a reduced core of content.
- The existing Key Features are presented over three broad stages or planning cycles (P1-3; P4-6; and P7-S2). This planning framework should be changed to describe Knowledge and Understanding by Level rather than cycle, as with other Guidelines.
- In planning for learning and teaching within Environmental Studies, schools tend to describe Knowledge and Understanding by class stage. The revised guidelines should acknowledge this by providing models of planning by class stage.
- Some elements of Knowledge and Understanding should be relocated to ensure that there is a consistent degree of challenge across the levels (e.g. by ensuring that the Attainment Targets at Level D in Science are realistic for primary pupils).

APPENDIX 6.1

Teachers Surveys – Questionnaires

1994 and 1995

Teaching Farming (Farming in the 5-14 Curriculum)

This questionnaire will form part of a research project being undertaken in the Department of Education, University of Edinburgh. The overall purpose of this research is to find out how teachers and pupils develop a knowledge and understanding of farming and other commercial activities undertaken in the rural areas of Scotland, particularly through the use of resource materials. Your help is needed with this research.

Please tick the appropriate boxes

1. Which type of school do you teach in?

Nursery ☐ Primary ☐ Secondary ☐ Special ☐

Local Authority ☐ Independent ☐ Other ☐ .....

2. Where is the school located? Region .....

Inner city ☐ Suburb ☐ Town ☐ Village ☐

3. What age group do you teach?

3-5 ☐ 5-7 ☐ 8-12 ☐ 13-15 ☐ 16+ ☐

4. Where do you live ?

Inner city ☐ Suburb ☐ Town ☐ Village ☐ Farm/estate ☐ Other ☐

5. Where did you spend your childhood?

Inner city ☐ Suburb ☐ Town ☐ Village ☐ Farm/estate ☐ Other ☐

6. Which other areas have you lived in??

Inner city ☐ Suburb ☐ Town ☐ Village ☐ Farm/estate ☐ Other ☐

7. Do you have any close relations who stay in the countryside? Yes ☐ No ☐

8. Do they also work in the countryside? Yes ☐ No ☐

9. If the answer is "Yes", what is their main occupation?

Farming ☐ Forestry ☐ Estate worker ☐ Quarrying ☐ Other ☐

10. Did you study farming during your teacher training ? Yes ☐ No ☐
If "Yes", please complete below ?

Name of college ..... Course attended .....

Rural land use included in ..... .(teaching unit)

Teaching Farming and other Rural Land Uses

11. Do you personally teach rany of the following? Yes ☐ No ☐

If "Yes" please tick the topic and the level taught (i.e. P1, S2, etc.)

		year		year		year		year
Farming in	Scotland	☐	UK	☐	Europe	☐	Other countries	☐
Food production in	Scotland	☐	UK	☐	Europe	☐	Other countries	☐
Forestry in	Scotland	☐	UK	☐	Europe	☐	Other countries	☐
Conservation in	Scotland	☐	UK	☐	Europe	☐	Other countries	☐
Other rural land uses in Scotland		☐	UK	☐	Europe	☐	Other countries	☐

12. If you are a teacher at secondary level which subjects do you teach?

Geography ☐ Biology ☐ Home Economics ☐ Social studies ☐ History ☐

Other.....

13. If you use farming as part of topic work, please give details of the topic titles.

.....

.....

.....

.....

14. Which of the '5-14 Guidelines' have so far been introduced into your school curriculum?

English Language ☐ Gaelic ☐ Latin ☐ Modern European Languages ☐

Mathematics ☐ Environmental studies ☐ Expressive Arts ☐

Religious and moral education ☐ Personal and Social Development ☐

15. Under which of the above curriculum areas will farming be taught?

.....

.....

Don't know ☐

16. If you will be teaching farming in cross-curriculum topics, please state the themes and the level at which they will be studied.

.....

.....

.....

.....

17. Do you think that farming should be taught in schools? Yes ☐ No ☐

Please state your reasons.

.....

.....

18. What do you think are the most important features that pupils should learn about farming?

.....

.....

.....

Resources used in teaching Farming

19. What type of resources do you use in teaching farming?

Text books ☐ Education packs ☐ Own resource materials ☐ Audio visual ☐

Computer programmes ☐ Videos ☐ TV programmes ☐ Other .....

20. Please list the main resources you use in teaching this topic and the level of the pupils using them.

Resource	Level
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

21. Where do you obtain these resources from?

Own school resources ☐ Resource centres ☐ Own personal materials ☐

22. Where do you obtain information about new resources?

Resource centres ☐ Advisory service ☐ Newspapers/magazines ☐ Other media ☐

Directories of resources ☐ Direct mailing ☐ Staff room ☐ Colleagues ☐

Other. . . . . .

23. Have you ever used resources produced by any of the following organisations? Please tick the appropriate boxes.

Milk Marketing Boards	☐	Potato Marketing Board	☐
British Wool Marketing Board	☐	Meat and Livestock Commission	☐
British Chicken Information Council	☐	British Egg Information Council	☐
Food and Farming Information Service	☐	Food from Britain	☐
British Agrochemical Association	☐	Fertilizer Manufacturers Association	☐
British Nutrition Foundation	☐	Soil Association	☐
Scottish Association of Agriculture	☐	National Farmers' Union of Scotland	☐
Countryside Commission for Scotland	☐	Nature Conservancy Council	☐
Scottish Natural Heritage	☐	Highlands and Islands Enterprise	☐
National Trust for Scotland	☐	Forestry Commission	☐
Royal Society for the Protection of Birds	☐	Vegetarian Society	☐
Scottish Society for the Prevention of Cruelty to Animals	☐	Others.	

. . . . . .

. . . . . .

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. . . . . .

Please hand this in at the Education Centre at the Royal Highland Show or return it to Dorothy Amyes, Scottish Association of Agriculture, Royal Highland Centre, Ingliston, Edinburgh EH28 8NB, by 10th July at the latest.

Thank you for completing this questionnaire.

Rural Land Use in the 5-14 Curriculum

This questionnaire will form part of a research project being undertaken in the Department of Education, University of Edinburgh. The overall purpose of this research is to find out how rural land use (farming and other activities undertaken in the rural areas) is being taught, where it occurs in the curriculum , and what resources are being used in teaching the subject. particularly through the use of resource materials. Your help is needed with this research.

If you completed a similar questionnaire in 1994 I would be grateful if you could also complete the 1995 version. **Please tick the appropriate boxes.**

1. Which type of school do you teach in?

Nursery ☐ Primary ☐ Secondary ☐ Special ☐ FE College ☐

Local Authority ☐ Independent ☐ Other ☐ .....

2. Where is the school located? Region .....

Inner city ☐ Suburb ☐ Town ☐ Village ☐

3. What age group do you teach?

3-5 ☐ 6-7 ☐ 8-12 ☐ 13-15 ☐ 16+ ☐

4. Where do you live ?

Inner city ☐ Suburb ☐ Town ☐ Village ☐ Farm/estate ☐ Other ☐

5. Where did you spend your childhood?

Inner city ☐ Suburb ☐ Town ☐ Village ☐ Farm/estate ☐ Other ☐

6. Which other areas have you lived in?

Inner city ☐ Suburb ☐ Town ☐ Village ☐ Farm/estate ☐ Other ☐

7. Do you have any close relations who stay in the countryside? Yes ☐ No ☐

8. Do they also work in the countryside? Yes ☐ No ☐

9. If the answer is "Yes", what is their main occupation?

Farming ☐ Forestry ☐ Estate worker ☐ Quarrying ☐ Other ☐

10. Did you study farming/rural land use during your teacher training ? Yes ☐ No ☐

Name of college attended..... Course attended .....

Date attended from ..... to .....

If the answer to the above question was " yes" please indicated the teaching unit Rural land use was included in .....

Teaching Farming and other Rural Land Uses

11. Do you personally teach any of the following? Yes ☐ No ☐

If "Yes" please tick the topic and the level taught (i.e. P1, S2, etc.)

		year		year		year		year
Farming in:	Scotland	☐	UK	☐	Europe	☐	Other countries	☐
Food production in:	Scotland	☐	UK	☐	Europe	☐	Other countries	☐
Forestry in:	Scotland	☐	UK	☐	Europe	☐	Other countries	☐
Conservation in:	Scotland	☐	UK	☐	Europe	☐	Other countries	☐
Other rural land uses in:	Scotland	☐	UK	☐	Europe	☐	Other countries	☐

12. If you are a teacher at secondary level which subjects do you teach?

Geography ☐ Biology ☐ Home Economics ☐ Social studies ☐ History ☐

Other.....

13. If you use farming as part of topic work, please give details of the topic titles.

.....

.....

.....

14. Which of the '5-14 Guidelines' have so far been introduced into your school curriculum?

English Language ☐ Gaelic ☐ Latin ☐ Modern European Languages ☐

Mathematics ☐ Environmental studies ☐ Expressive Arts ☐

Religious and moral education ☐ Personal and Social Development ☐

15. Under which of the above curriculum areas will farming/rural land use be taught?

.....

..... Don't know ☐

16. If your school has produced a "development" plan, please indicate where any of the topics relating to rural land use have been include and at what level they will be studied.

.....

.....

17. Have you or your school received any guidance from any of the following on the teaching of rural land use?

Scottish Office Education department (SED) Yes ☐ No ☐
Scottish Consultative Council on the Curriculum (SCCC) Yes ☐ No ☐
Regional Advisory Service Yes ☐ No ☐
Other organisation (please give name) .....

Please indicate any publications, if relevant. .....

.....

.....

.....

18. Do you think that farming should be taught in schools? Yes ☐ No ☐

Please state your reasons.

.....

.....

19. What do you think are the most important features that pupils should learn about farming?

.....

.....

.....

Resources used in teaching Farming and Rural Land Use

20. What type of resources do you use in teaching farming and rural land use?

Text books ☐ Education packs ☐ Own resource materials ☐ Audio visual ☐

Computer programmes ☐ Videos ☐ TV programmes ☐ Other .....

21. Please list the main resources you use in teaching this topic and the level of the pupils e.g. level

.....

.....

.....

.....

.....

.....

22. Where do you obtain these resources from?

Own school resources ☐ Resource centres ☐ Own personal materials ☐

23. Where do you obtain information about new resources?

Resource centres ☐ Advisory service ☐ Newspapers/magazines ☐ Other media ☐

Directories of resources ☐ Direct mailing ☐ Staff room ☐ Colleagues ☐

Other.....

24. Have you ever used resources produced by any of the following organisations? Please tick the appropriate boxes.

Milk Marketing Boards	☐	Potato Marketing Board	☐
British Wool Marketing Board	☐	Meat and Livestock Commission	☐
British Chicken Information Council	☐	British Egg Information Council	☐
Food and Farming Information Service	☐	Food from Britain	☐
British Agrochemical Association	☐	Fertilizer Manufacturers Association	☐
British Nutrition Foundation	☐	Soil Association	☐
Scottish Association of Agriculture	☐	National Farmers' Union of Scotland	☐
Countryside Commission for Scotland	☐	Nature Conservancy Council	☐
Scottish Natural Heritage	☐	Highlands and Islands Enterprise	☐
National Trust for Scotland	☐	Forestry Commission	☐
Royal Society for the Protection of Birds	☐	Vegetarian Society	☐
Scottish Society for the Prevention of Cruelty to Animals	☐	Others.....	

Please hand this in at the Education Centre at the Royal Highland Show or return it to Dorothy Amyes, Scottish Farm and Countryside Educational Trust, Royal Highland Centre, Ingliston, Edinburgh EH28 8NF, by 10th July at the latest.

Thank you for completing this questionnaire.

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APPENDIX 6.2

Resource Providers Questionnaire

Private and Confidential

The results of this questionnaire will form part of the research project looking at the place of rural land use in the 5-14 curriculum and the resources available on this subject.

For this research rural land use is defined as farming, forestry and other activities undertaken in the rural environment.

Dorothy M G Amyes, Department of Education, University of Edinburgh

Name of Organisation:

.....

Address: .....

Contact name ..... Position .....

Please indicate if you would be willing to participate in an interview, at a later stage of this research.

YES ☐ NO ☐

---

1. Please state your organisation's educational aims and objectives.

.....

.....

.....

.....

.....

.....

2. Have you produced a policy statement to explain your educational aims and objectives? YES ☐ NO ☐

If possible, please supply a copy of this policy statement.

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3. Does your educational work include reference to **rural land use**?
YES ☐ NO ☐ **If Yes, please complete the remaining questions.** If no, please return the questionnaire in the envelop provided and thank you for your help.

4. In order to achieve your educational aims and objectives do you carry out work for Scottish schools YES ☐ NO ☐

If YES,

i) for how many years has your organisation been undertaking this type of work . . . . . .

ii) how highly does your organisation rank educational work?

Very highly ☐ Highly ☐ Moderately High ☐ Fairly Low ☐ Low ☐

5. What does this work involve ?

☐ production of resource materials - if yes, please complete page 4

☐ site visits/organisation of visits

☐ in-service training

☐ contacts with the colleges of education

☐ operating a speaker service

☐ operating a residential centre

☐ production of curriculum guidelines for teachers

☐ other. Please list . . . . . .

6. Which of the above do you place most emphasis on to achieve your aims?

. . . . . .

7. Are these activities developed specifically for Scottish schools?

YES ☐ NO ☐

If YES, are they designed for use in the 5-14 curriculum ? Please list.

. . . . . .

If no, are they produced for :

☐ both National Curriculum and the Scottish curriculum,

☐ national curriculum with guidelines for Scottish teachers

or ☐ not curricula related

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8. What methods does your organisation employ to publicise your educational work?

Direct mailing to schools ☐ Direct mailing to named individuals ☐

Advertising in educational publications ☐

Please state publications .....

Other means .....

8b Which of the above do you consider to be the most effective? .....

---

9. How do you distribute your educational material?

Through education departments ☐ Direct mailing to schools ☐

Direct mailing to named individuals in schools ☐

Other. Please list .....

.....

9b Which of the above do you consider to be the most effective? .....

---

10. Please list any charges your organisation makes for its educational services (except for resource material) .....

.....

.....

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11. Does your organisation operate an information service for schools? YES ☐ NO ☐

If yes, what kind of information do you provide? .....

Do you respond to requests ?

by letter ☐ by telephone ☐ other ☐

Approximately how many requests do you get per year .....

Please rank from 1-7, (the most numerous requests first)

primary age pupils ☐ secondary ☐ teachers ☐ FE students ☐

university students ☐ trainee teachers ☐ other ☐

10. Did you make a formal response to the RDG 13 Working paper report on Environmental Studies?

YES ☐ NO ☐ If YES, please send a copy of this response

Please list any resources produced by your organisation which are for use in the 5-14 curriculum and contain references to farming, forestry or the rural environment.

Resource	Media eg book, video	5-14 Level (A-E, if specified)	Charge made

Please return to Dorothy Amyes, 10 Marchhall Road, Edinburgh EH16 5HR, in the envelop provided, by **12 August 1996.**

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Thank you for your help.

APPENDIX 6.3 List of organisations contacted for resource providers survey

Advocates for Animals
Animal Concern.
Association for the Protection of Rural Scotland
Association of Science Education
Association of Scottish Shellfish Growers
Bank of Scotland
BBC Education
Biological Recording in Scotland
Biotechnology and Biological Sciences Research
BNFL
Botanical Society of the British Isles (Scotland)
BP Education
British Agrochemicals
British Association
British Association for Shooting and
British Cement
British Deer Society - Scottish Office
British Egg Information Service
British Gas Education
British Waterways
British Wind Energy Association, Scottish Branch
Buchan Countryside Group
Cairngorms Partnership
The Campaign for the Future of the Border Hills
Central Broadcasting
Central Statistical Office/Office for National
Centre for Alternative Technology
Channel Four Schools Service
Chevron UK LTd
Confederation of British Wool Textiles
Convention of Scottish Local Authorities
Copper Development Association
Council for British Archaeology
Council for Environmental Education
Crime Concern
Crystal Presentations Ltd
Dupont Conoco Services to Education
Earthward
Edinburgh Green Belt Trust
Elf Enterprise Caledonia Ltd
Energy Action Scotland
Fertiliser Manufacturers Association
Financial Times
Fire Protection Association

Food and Farming Information Service
Forestry Commission
Glasgow for People
Grounds for Learning Partnership
Historic Scotland
Historical Association - The
Institute of Food Science and Technology
Institute of Packaging
Institute of Petroleum
Institution of Civil Engineering Surveyors
Institution of Electrical Engineers
Ironbridge Gorge Museum Trust
J Sainsbury PLC
John West Information Service
Kellog Company of Great Britain Ltd
Landwise and Treewise
Manufacturing by Design c/o CBI
Mars Confectionery
McDonald's
Meat and Livestock Commission
Mountaineering Council of Scotland ~The
National Consumer Council
National Dairy Council
National Rivers Authority
National Rivers Authority - South Western Region (The Environment Agency - South West)
National Society for Clean Air
Nestle UK Ltd
New Lanark Conservation Trust
NIREX
Northern Studies Centre
One World Centre
Oxfam Development Education Department
Post Office Education Service
Procter and Gamble Ltd
Railway Development Society (Scotland).
Recycling Advisory Group Scotland.
Reforesting Scotland
Resources Plus Ltd
Royal Commission on the Ancient and Historical Monuments of Scotland
Royal Institution of Chartered Surveyors in Scotland
Royal Meteorological Society
Royal Society for the Protection of Birds - Scottish Headquarters
Royal Society of Chemistry
Rural Development Commission
Science Museum
Scottish Centre for Pollen Studies

Scottish Centres - Scottish Environmental and Outdoor Centres Assoc Ltd-
Scottish Energy Efficiency
Scottish Environmental Education Council
Scottish Natural Heritage
Scottish Nuclear Ltd
Scottish Railway Preservation Society
Scottish Wildlife Trust
SCSST(The Standing Conference on Schools' Science and Technology)
Sea Fish Industry Authority
Severn Trent Water
SFACET
Shell Education Service
Shetland Amenity Trust
Silk Education Service
SOAEFD
SSPCA
St Ivel Limited
Tayside Scrap Store Project
Technology Enhancement Programme
The Army
The Geographical Association
The Institute of Physics
The Institution of Chemical Engineers
The RAF
The RTZ Corporation Plc
The Salters' Institute of Industrial Chemistry
The Scotch Whisky Association
Trades Union Congress
Traidcraft PLC
TSB Bank Plc
Unilever Plc
Water of Leith Conservation Trust
Waterford-Wedgwood UK ltd
Weather Watchers Network Ltd
Wemyss Environmental Education Centre.
Wildfowl and Wetlands Trust - Caerlaverock
Woodland Trust ~The
WWF-Scotland
Zeneca Agrochemicals

APPENDIX 6.4 - Interviews description of schools

School	Description
1	One of smallest primary schools in the area with only 10 pupils (this had recently increased from 5). Very rural area, parents mostly worked on the nearby large estate. Head teacher plus part-time help.
2	Medium sized primary school in semi-rural area.
3	Medium sized primary in expanding settlement close to Aberdeen
4	Small village school
5	80 pupil village school, 4 teachers
6	Medium sized primary in a Borders town, recently moved to new premises.
7	Small-medium sized school in semi-rural location
8	Large village school, expanding due to new house building in area. One or two composite classes but will be expanding to single classes in next few years
9	Large urban primary school
10	Small independent school for children with special needs, in rural area

Appendix 7.1a Reasons given by teachers as to why farming should be taught in schools

1994	1995
Primary Teachers	**Primary Teachers**
• As the children live in the countryside they should learn about their environment. • In the city some of the children have no concept of farming and this is an excellent topic to use. • Children are unaware of the origins of their, particularly processed, foods. • So that children can appreciate what is involved in the production of various foods. • To make children aware of food sources and farming methods. Also conservation issues. • Elements of agriculture in a pollution/conservation topic are needed. • It is an industry which is very close to home. Children are surrounded in this area (East Lothian) by fields and farms - they must have an understanding of what happens on them, and the implications they have on their own lives. • Part of our heritage. Important to our area (Borders). Good 'outdoor' education. • Its part of our national heritage, part of Scottish culture, part of our 'scenery'; show food does not come instantly of a shelf etc. • Integral to our lives (Dumfries and Galloway). Major rural employer. • Although few children are farmer's sons/daughters, many children can trace their family tree and see that farming was in their family. • Awareness of the environment. Countryside rules etc. • Contains basic essential knowledge - effects of weather – your place latitudinally. • Essential to where our food comes from. Also natural use of land.	• It is a fundamental industry and one which affects everyone. • Farming plays a major part in the Scottish economy and pupils should be aware of where Scottish food comes from. • It's good for them to know how food gets to their plate and about other occupations. • This is a rural area and the major part of the pupils' experience is in farming. Farm, food and the environment are global issues. • Farming/land use is an important aspect of the culture/economy of Scotland. • Provides knowledge of history and development of land use, technology, way of life, etc.. • So many of the children's grand parents were of farming stock. • At primary level it gives them an insight into an environment outwith their own. • Understanding of environment, food production, peoples livelihood dependent on farming. • It is a major part of the food chain. Children see fields and farms daily. An essential contribution to our continued existence.

• It is an integral part of the Scottish economy and life. • To give children knowledge and understanding of a part of environment they might otherwise not know about.	
Secondary Teachers • To understand where food comes from. To dispel some myths re. Keeping and killing livestock. • Vital piece of jigsaw that makes up our world. • Inherent part of our socio-economic framework. • Important aspect of rural life/landuse. • Pupils should know (i) from where and when food arrives at their table, (ii) how much of our land area is used and cared for. • So important to understand - recreation, scenic value/input, food production - appreciation. • Part of Scottish life. • Awareness of land use, food availability, rich/poor divide, staple foods. Cost - awareness of market forces. • Specific to Scotland - able to see food products from Scotland. • It is a fundamental part of our society which needs to be understood so that it can be appreciated/conserved/encouraged. • I don't think it needs to be compulsory - but offered as an option in year 10/11 (English school). • Because it is an important part of Scotland's past and present. • Agriculture provides a vehicle for teaching a range of topics e.g.. conservation/environment/biology/health/hygiene/ etc..	**Secondary Teachers** • To appreciate the life of farming communities and, • to appreciate the influence of government in determining prices etc.. • It is a very relevant topic especially for pupils living in rural areas, as well as this it makes all pupils aware of environmental issues within in the country they live in. • Develop an appreciation of rural land use/abuse and • Because of its significance to recreational users of the countryside. • Pupils should know how and where their food comes from and appreciate the problems especially on the rural urban fringe. • Farming, in one form or another, makes up the major land use in Scotland. Important for pupils to appreciate the value of our countryside as a source of food, recreation etc.. • Important part of Scottish Economy and crucial element in the human landscape. • Vital knowledge. Good for skills based work. Good for investigations. • Rural community school - importance of food production, land use locally. • Guardians of the countryside. **Special** • Children should be aware how food is produced. • Farming is vital in all our lives for basic human needs of food and clothing.

7.1b What teachers think are the most important features that pupils should learn about farming

1994	1995
Primary Teachers • Safety around farms. • Farm systems and cycles. • Types of animals produced in Scotland. • Reverence for life. • Nutrition dependent. • Livestock. Crops. Farmer's job i.e. his livelihood. Types of farming i.e. dairy. • How a farm is organised and what the farmer's job entails. • Rural activities, farmer's leisure time. • What happens to the farmer's produce. • Appreciation and understanding of the countryside and hopefully enjoyment from it. • These vary depending on age of children involved and depth of study being undertaken. • It looks after the land. It provides food. • How crops are grown and their final product. • Food stuffs in general which come from farms. • What a farmer's job entails. • Landuse. Conservation. Wildlife. • Types of farming. • Management of land:- food and recreation. • Education to make informed and balanced assessment and decisions of food to eat etc. • Why we have farms • What are farms. • Types of farms. • Most food can grow on Scottish farms. • We rely on farms supplying us with our food. • Identifying farm animals. • Conservation. • Community life. • Industry. • Economics and the spread of different crops	**Primary Teachers** • The economics of food production – environmental/conservation implications. • Types of farming, products, breeds. • Farming is an industry. The factors which affect the type of farming in an area. Farming and the environment. • Diversity of farming in Scotland/climate and topographical influences/conservation issues related to farming. • History and development of land use, technology, way of life etc.. • Seasons, good livestock farming, food from farm to table. • At primary level children find out about different types of farms and farming at a very basic level. • Learn about local environment. • Animal Welfare, • Dangers of harmful pesticides • Conservation of natural woodlands.

around the world. • Main types of farming and what they produce. • The best way of using the land. • Society's dependency on agriculture • Diversity of agriculture throughout the world and the reason for this. • Importance and use of land and animals.	

Appendix 7.2 Resources used in teaching farming

	Resource	Level Used
Primary		
	Local farms	Preclass/P1
	Lanark Mart	
	Resource Centre, Hamilton	
	Extra large farm	
	(with seasonal materials/animals)	
	Videos	
	Never Rest (video)	C
	HSE topic packs	C
	RSPB - farm conservation	C
	Farming - library books	C
	Charlotte's Web -E B White	P4
	Variety of library books	P4
	TV programmes on pre- recorded videos	P5
	Up to date information from organisations	
	farm visit	
	agricultural museum	
	Books	P3-7
	Computer Programs	
	Video	
	TV programmes	
	Education packs	
	Landmarks (BBC video)	C/D
	Earthwatch (video)	
	Worksheets	B
	Videos	
	text books	
	children's own information and experience and ideas.	
	Videos	P4-7
	Books etc.	P1-3
	Facilities in the local area for "hands on" experience backed up by material from posters, books, videos (school broadcasts in the past have been very good - but emphasis seems to be narrowing) computer programs etc.	B-E

Resource	Level
Primary cont.	
Milk Marketing Board packs	P6/7
Visits to farms and own worksheets	
Visits to Asda -note Scottish foods	
Visits to Mart - view animals	
Visit Clinterty Rural College	
Around Scotland Farm Programmes	
BBC Education -Watch	
Infant	
Education Atlases	P6/7
Encyclopaedias	
School library	
Own interest in Geography	
Project boxes from resource centre	C/D
School based resource boxes	
Teacher produced materials	
Oxford Junior English 2	B
Oxford Junior Extension	B
"Farms" (Macdonald)	A-C
Secondary	
"Our Landscapes" (Oliver and Boyd)	S1-S2
Key Geography "Connections"	S3-S4
Core themes in Geography "Human"	S5
A range of standard texts - Scottish Studies (Gilcrist)	
Europe (Waugh)	
World (Waugh)	
Textbooks/videos	S3, S6 geog.
Textbooks: " The British Isles" (Waugh)	S Grade(Gen/Credit)
"Studies in Geography" (Broadley and Goring)	(Foundation)
The Human Environment (Clarke)	(F/G/C)
Computer Program: British Farm Model	
" "	
TV: BBC Education - various	

Secondary cont.

Leaflet and Newsletter - Packaging/Sandwich Filling	S Grade/ Higher/S1-2
Dairy Council	S1 and 2
School produced workbooks	S1-5
Visits to local farms	S3 and S5
Videos	All years

Appendix 8.1 – Educational aims and objectives of resource providers

Advocates for Animals	
Animal Concern	Abolition of animal exploitation through lobbying the public and politicians
Association for the Protection of Rural Scotland	
Association of Science Education	
Association of Scottish Shellfish Growers	To inform and educate about the benefits of shell fish farming; sustainability, job creation in rural areas and non-polluting nature of work.
BBC Education	To provide a wide range of educational broadcasts and resources catering for all ages and for all parts of the UK. This commitment is laid down in the BBC's charter.
Biotechnology and Biological Sciences Research Council	
Botanical Society of the British Isles (Scotland) ~The	We are an amateur and professional Botanical society formed to promote botanical studies in the British Isles through planrt recording, holding lectures, meetings, field meetings, workshops, etc. We are active in plant conservation in the UK Education
British Agrochemicals Association	1. to offer pupils and teachers learning opportunities from the life sciences, the technical and economic expertise of the crop protection and crop production industries. 2. To encourage pupils and teachers to gain a more complete understanding of the
British Association for Shooting and Conservation	BASC is the representative and controlling body for sporting shooting in the UK. Three important objectives are: - set standards for the sport to ensure a legal, safe and enjoyable experience; - ensure a responsible image and reputation for shooting;
British Deer Society – Scottish Office	
British Wind Energy Association, Scottish Branch	To promote the use of wind power To disseminate information
Buchan Countryside Group	To help people understand and appreciate their natural environment and its wildlife. To support environmental work in schools To support environmentally – linked elements of the 5-14 curriculum
Cairngorms Partnership ~The	Part of our remit is to disseminate understanding and information in the Cairngorms area about the work of the partnership. This involves talking to local groups, University students and the like. We have not produced any information specifically for schools.
Channel Four Schools Service	To provide television resources to support the curriculum for 5-18 year olds in the UK

Christian Aid	
Crystal Presentations Ltd (DuPont Conoco Services to Education)	Dupont Conoco Services to Education Provide high quality sponsored educational resources for teachers – available at a subsidised price or free of charge.
Earthward	Education and training are an integral part of our stated business aims. We present information through demonstrations, courses, public participation and client-specific design and training courses.
Edinburgh Green Belt Trust	Out Trust's main contribution to education is by way of our community involvement work with groups and organisations in and around the green belt. However, our Trust does provide some education materials to students and we do respond to a steady flow of enquiries from pupils/students on standard geography research.
Fertiliser Manufacturers Association	To help children and teachers and the public at large to understand what fertilisers are, the role they play in agriculture, and how they are produced and used in a responsible and environmentally acceptable manner.
Food and Farming Information Service	To promote an understanding of UK Food and Farming in schools by encouraging its teaching within the national curriculum.
Forestry Commission	
Grounds for Learning Partnership	GFLP promotes sustainable improvements to the quality and educational use of school grounds in Scotland.
Mountaineering Council of Scotland ~The	No specific educational aims but education is implicit in our scope of work on conservation/safety/access.
National Rivers Authority - South Western Region	To initiate, advance and support environmental education, in order to develop and influence an environmentally conscious and responsible society.
New Lanark Conservation Trust	To maximise the use of New Lanark as an educational resource by the widest possible range of people/age groups, across many disciplines.
NIREX	To provide curriculum related materials and to assist in educational activities to improve understanding of matters relating to our business.
Northern Studies Centre	We promote interest and provide talks/outings on a variety of topics – natural history, archaeology, science, archives.
One World Centre	
Railway Development Society (Scotland)	Education of people of all ages about the advantages of rail travel in towns and cities.
Reforesting Scotland	To teach all age groups about the deforestation of the Scottish landscape and the social, culltural and economic losses due to this – and to teach people why we should reforest the Scottish landscape in the interests of rural communities and rural

	repopulation development.
Royal Commission on the Ancient and Historical Monuments of Scotland	
Royal Incorporation of Architects in Scotland	
Royal Institution of Chartered Surveyors in Scotland	To seek to create new opportunities to attract a broad range of high calibre entrants into the profession to equip recruits with knowledge and skills relevant to changing needs. To maintain close links with Scottish academic institutions.
Royal Society for the Protection of Birds – Scottish Headquarters	Strive to make sure that young people in the UK complete their education with an understanding of the importance of biodiversity and sustainability; see how their own actions and decisions affect the environment; and are committed to adopting a more sustainable life-style. Promote an understanding of the importance of biodiversity and sustainability with other target audiences so that they make decisions that benefit the environment. The RSPB has a 'Manifesto for Education in Scotland'
Scottish Environmental Education Council	To initiate, advance and support environmental education, in order to develop and influence an environmentally conscious and responsible society.
Scottish Natural Heritage	Within our remit as an agency of government we have an objective of improving understanding and awareness of the natural heritage. I enclose a copy of our statement of intent for Environmental Education - formal education is only a small part of this.
Scottish Wildlife Trust	
Severn Trent Water	To improve the company's image by increasing the knowledge and understanding of the work of the company by first hand experience of our working environment.
SFACET	To help the public gain a better understanding of farming and rural issues.
Shetland Amenity Trust	
SSPCA	SSPCA Education Department aims to develop informed attitudes in order to prevent cruelty to animals so often caused by ignorance.
The Environment Agency(National Rivers Authority - South Western Region)	
Traidcraft PLC	To produce materials, related to the curriculum, on issues of fair trade and business organisation. Developing awareness of fair trade issues.
Wemyss Environmental Education Centre.	To help meet the needs of Fife schools and the commnuity in general for environmental education by provision of resources, opportunity to experience the outdoors and personnel in line with

	Fife Council's policy under Local Agenda 21
Wildfowl and Wetlands Trust – Caerlaverock	To save wetland for wildlife and people
Woodland Trust ~The	We currently target schools located close to our woodlands and encourage their involvement in it. we are piloting 'Adopt a wood' allowing schools to take practical action as well as using us an an educational resource.
WWF Scotland	WWF- UK aims to enable the systems that are set up for life long learning to provide all citizens, as of right, with the insights, understanding, skills and confidence to participate effectively in the decisions that impact on the quality and structures of their world.
Zeneca Agrochemicals	Education liaison strategy

APPENDIX 8.2 Additional comments made by the teachers during interviews

School	
1	Knowing who to contact for additional resources. Good quality resources hard to find Regional guidance available but tend to use guidelines Separate countryside topic based on the local river
2	Time factor in drawing up resources Management of Environmental Studies Course – Grampian region in-service course. SCCC resources catalogues useful.
3	Use own experience and those of children. Can't spend as much time as used to – less depth Other projects – forestry/conservation at field centre. Trips now have to be paid for therefor have been cut down. Used to use local agricultural college but they now charge. Topic boxes are made up for 'the farm' as opposed to Scottish farming/local farming. Books are not always accurate.
4	No lack of resources Trees/countryside/nature – separate topic
5	An easy topic to resource If topics designed for 5-14 would still have to adapt for individual pupil abilities. Plenty of advertising material available.
6	Plenty of resources available but not necessarily in every school
7	Time needed to develop bank of materials. Plenty of material available. Composite class – therefor have to be flexible in selection of topics. No help given from l.e.a. – resource centre has closed down No co-operation between schools –'everybody is territorial'
8	Time – therefor 5-14 resources would be useful Separate countryside project – country code etc. Used publications such as Teachers Treasure Chest, Child Education, Junior Education – resource lists.
9	Companies very helpful – sent samples Region used to run an in-service at the local agricultural college until the money ran out about 5 years ago – very practical Often composite class therefore cannot plan topic until know which class
10	Chief resource – people Did not use videos/slides as they would not have held children's attention. Although rural school most of pupils are from urban areas – small classes – 6 pupils.